

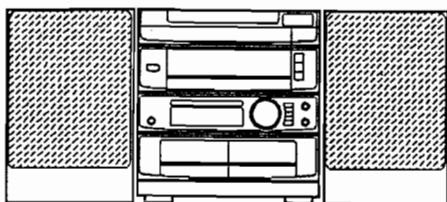
aiwa



AIWA-02345



Z-R700 Z-R710



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM: 2ZM-3MK2 PR5NM
- BASIC CD MECHANISM: 6ZG-1 SDFNM

- TYPE: LH, HE

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
Z-R700	CX-ZR700 (TYPE : HE)	SX-FZR700	RC-7AS01
Z-R710	CX-ZR710 (TYPE : LH)		

- If requiring information about the CD mechanism, see Service Manual of 6ZG-1.
(S/M Code No.09-975-198-00T)
- If requiring information about the Speaker, see Service Manual of SX-FZR700.
(S/M Code No.09-974-199-5FE)

2345

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainituilla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylitävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstråling, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

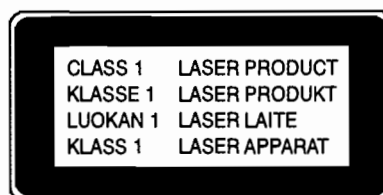
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

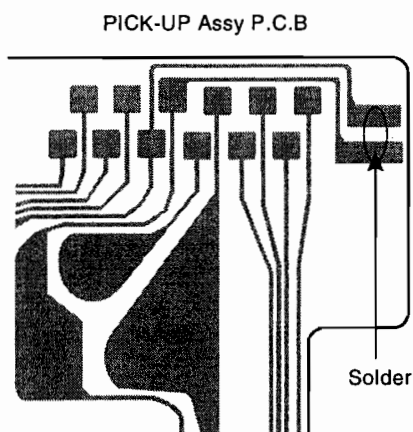


Precaution to replace Optical block

(KSS – 213B)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in right figure.



ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C104	87-A10-056-090		CAP,E 4700-35 M
	87-020-454-010	IC, DN6851		C105	87-012-368-080		C-CAP,S 0.1-50 ZF
	87-MA3-603-010	C-IC, LC866560W-5E82		C106	87-012-368-080		C-CAP,S 0.1-50 ZF
	87-A20-448-010	IC, PIC-21043TE3		C107	87-012-368-080		C-CAP,S 0.1-50 ZF
	87-017-915-080	C-IC, BU4094BCF		C108	87-012-368-080		C-CAP,S 0.1-50 ZF
	87-A20-455-010	IC, HA12211		C109	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
				C110	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
	87-A20-355-010	IC, CXA1553P		C111	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
	87-A20-083-010	IC, BA3835S		C112	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
	87-A20-450-040	C-IC, BH3864F		C113	87-010-247-080		CAP,E 100-50 M SME
	87-A20-056-010	IC, BA3880S		C116	87-010-247-080		CAP,E 100-50 M SME
	87-A20-451-040	C-IC, BU9262FS		C117	87-010-430-080		CAP,E 100-63
				C118	87-010-263-080		CAP,E 100-10 SME
	87-A20-456-040	C-IC, BH3810FS		C119	87-010-260-080		CAP,E 47-25 SME
	87-017-888-080	C-IC, NJM4558MD		C120	87-010-403-080		CAP,E 3.3-50 M SME
	86-NFZ-655-010	IC, LC72131D(Z)		C121	87-012-140-080		C-CAP,S 470P-50 J CH
	87-A20-438-010	IC, LA1837		C123	87-010-382-080		CAP,E 22-25 M SME
TRANSISTOR				C124	87-010-112-080		CAP,E 100-16 M SME
	87-026-463-080	TR, 2A933S		C125	87-010-235-080		CAP,E 470-16 SME
	87-026-263-080	C-TR, RN1410		C129	87-010-393-080		CAP,E 100-35 M SME
	89-213-702-010	TR, 2SB1370E		C201	87-010-401-080		CAP,E 1-50 M SME
	87-A30-076-080	C-TR, 2SC3052F		C202	87-010-401-080		CAP,E 1-50 M SME
	89-112-965-080	TR, 2SA1296GR		C205	87-010-181-080		C-CAP,S 1800P-50 KB<LH>
				C205	87-010-182-080		C-CAP,S 2200P-50 KB<HE>
	87-026-610-080	TR, KTC3198GR		C206	87-010-181-080		C-CAP,S 1800P-50 KB<LH>
	87-A30-073-080	C-TR, RT1N 141C		C206	87-010-182-080		C-CAP,S 2200P-50 KB<HE>
	87-A30-085-070	C-TR, CSA1362GR		C207	87-010-404-080		CAP,E 4.7-50 M SME
	87-A30-083-080	TR, CSD1489B		C208	87-010-404-080		CAP,E 4.7-50 M SME
	87-A30-075-080	C-TR, 2SA1235F		C209	87-010-404-080		CAP,E 4.7-50 M SME
				C210	87-010-404-080		CAP,E 4.7-50 M SME
	87-A30-084-080	TR, CSB1058B		C211	87-010-186-080		C-CAP,S 4700P-50 KB
	87-A30-071-080	C-TR, RT1N 144C		C212	87-010-186-080		C-CAP,S 4700P-50 KB
	87-026-609-080	TR, KTA1266GR		C213	87-010-260-080		CAP,E 47-25 SME
	87-A30-086-070	C-TR, CSD1306E		C214	87-010-260-080		CAP,E 47-25 SME
	87-A30-106-070	C-TR, CMBT5551		C215	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
	87-A30-111-080	TR, C2N5401		C219	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
	87-A30-097-010	TR, FN1016		C220	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
	87-A30-098-010	TR, FP1016		C221	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
	87-A30-089-010	FET, 2SK2723		C222	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
	87-A30-072-080	C-TR, RT1P 144C		C223	87-010-194-080		C-CAP,S 0.047-25 ZF
	87-026-266-080	C-TR, RN2404		C225	87-010-322-080		C-CAP,S 100P-50 J CH
	87-A30-087-080	C-FET, 2SK2158		C226	87-010-322-080		C-CAP,S 100P-50 J CH
	87-A30-074-080	C-TR, RT1P 141C		C241	87-010-406-080		CAP,E 22-50 M SME
	89-327-143-080	C-TR, 2SC2714(O)		C242	87-010-406-080		CAP,E 22-50 M SME
DIODE				C243	87-010-197-080		C-CAP,S 0.01-25 KB
	87-A40-270-080	C-DIODE, MC2838		C301	87-010-318-080		C-CAP,S 47P-50 J CH
	87-A40-115-060	DIODE, RS603M		C302	87-010-318-080		C-CAP,S 47P-50 J CH
	87-A40-246-080	DIODE, 1N4148T-72		C303	87-012-157-080		C-CAP,S 330P-50 J CH GRM
	87-017-437-080	DIODE, 1N4148M		C304	87-012-157-080		C-CAP,S 330P-50 J CH GRM
	87-A40-269-080	C-DIODE, MC2836		C305	87-012-145-080		C-CAP,S 270P-50 J CH
	87-070-274-080	DIODE, 1N4003 SEM		C306	87-012-145-080		C-CAP,S 270P-50 J CH
	87-A40-205-080	ZENER, UZ6.2BSC		C307	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
	87-A40-341-080	ZENER, MTZJ36A		C311	87-010-198-080		C-CAP,S 0.022-25 KB
	87-017-933-080	ZENER, MTZJ10D		C312	87-010-198-080		C-CAP,S 0.022-25 KB
	87-A40-004-080	ZENER, MTZ16A		C313	87-010-182-080		C-CAP,S 2200P-50 KB
	87-070-178-090	DIODE, 1N5402-BD54		C314	87-010-182-080		C-CAP,S 2200P-50 KB
	87-070-136-080	ZENER, MTZJ5.1B		C315	87-010-181-080		C-CAP,S 1800P-50 KB
	87-070-345-080	DIODE, 1N4148		C316	87-010-181-080		C-CAP,S 1800P-50 KB
	87-017-931-080	ZENER, MTZJ5.6B		C317	87-012-142-080		C-CAP,S 0.33-16 ZF
	87-A40-003-080	ZENER, MTZJ4.3A		C318	87-012-142-080		C-CAP,S 0.33-16 ZF
	87-A40-234-080	ZENER, MTZJ5.6A		C319	87-012-141-080		C-CAP,S 0.22-16 ZF
				C320	87-012-141-080		C-CAP,S 0.22-16 ZF
				C321	87-012-141-080		C-CAP,S 0.22-16 ZF
				C322	87-012-141-080		C-CAP,S 0.22-16 ZF
				C324	87-010-260-080		CAP,E 47-25 SME
MAIN C.B				C325	87-010-370-080		CAP,E 330-6.3 M SME
C101	87-016-520-090	CAP,E 3300-65 M SMG<HE>		C327	87-010-404-080		CAP,E 4.7-50 M SME
C101	87-A10-059-090	CAP,E 3300-75<LH>		C328	87-010-404-080		CAP,E 4.7-50 M SME
C102	87-016-520-090	CAP,E 3300-65 M SMG<HE>		C332	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
C102	87-A10-059-090	CAP,E 3300-75<LH>		C335	87-010-401-080		CAP,E 1-50 M SME
C103	87-A10-056-090	CAP,E 4700-35 M					

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C336	87-010-401-080		CAP,E 1-50 M SME	C722	87-010-312-080		C-CAP,S 15P-50 J CH
C337	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	C723	87-010-178-080		C-CAP,S 1000P-50 KB
C339	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	C725	87-010-178-080		C-CAP,S 1000P-50 KB
C340	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	C727	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
C351	87-012-140-080		C-CAP,S 470P-50 J CH	C728	87-010-248-080		CAP,E 220-10 SME
C352	87-012-140-080		C-CAP,S 470P-50 J CH	C755	87-010-197-080		C-CAP,S 0.01-25 KB
C354	87-010-306-080		C-CAP,S 560P-50 J CH	C756	87-010-197-080		C-CAP,S 0.01-25 KB
C355	87-010-178-080		C-CAP,S 1000P-50 KB	C757	87-010-318-080		C-CAP,S 47P-50 J CH
C356	87-010-260-080		CAP,E 47-25 SME	C758	87-010-149-080		C-CAP,S 5P-50 CH
C357	87-010-197-080		C-CAP,S 0.01-25 KB	C761	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
C358	87-010-183-080		C-CAP,S 2700P-50 KB	C762	87-010-197-080		C-CAP,S 0.01-25 KB
C359	87-010-183-080		C-CAP,S 2700P-50 KB	C763	87-010-194-080		C-CAP,S 0.047-25 ZF
C360	87-010-183-080		C-CAP,S 2700P-50 KB	C765	87-010-197-080		C-CAP,S 0.01-25 KB
C370	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	C766	87-010-197-080		C-CAP,S 0.01-25 KB
C371	87-010-179-080		C-CAP,S 1200P-50 KB	C767	87-010-405-080		CAP,E 10-50 M SME
C372	87-010-179-080		C-CAP,S 1200P-50 KB	C768	87-010-197-080		C-CAP,S 0.01-25 KB
C373	87-010-179-080		C-CAP,S 1200P-50 KB	C769	87-010-408-080		CAP,E 47-50 SME
C374	87-010-179-080		C-CAP,S 1200P-50 KB	C770	87-015-821-080		C-CAP, 0.047-50 ZF GR
C375	87-010-545-080		CAP,E 0.22-50 M SME	C771	87-010-407-080		CAP,E 33-50 SME
C376	87-010-545-080		CAP,E 0.22-50 M SME	C772	87-010-194-080		C-CAP,S 0.047-25 ZF
C378	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	C773	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
C381	87-010-197-080		C-CAP,S 0.01-25 KB	C774	87-010-263-080		CAP,E 100-10 SME
C382	87-010-318-080		C-CAP,S 47P-50 J CH	C775	87-010-404-080		CAP,E 4.7-50 M SME
C383	87-010-197-080		C-CAP,S 0.01-25 KB	C776	87-010-197-080		C-CAP,S 0.01-25 KB
C384	87-010-402-080		CAP,E 2.2-50 M SME	C777	87-010-400-080		CAP,E 0.47-50 M SME
C385	87-010-184-080		C-CAP,S 3300P-50 KB	C778	87-010-401-080		CAP,E 1-50 M SME
C386	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	C779	87-010-401-080		CAP,E 1-50 M SME
C388	87-010-154-080		C-CAP,S 10P-50 D CH	C780	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
C401	87-010-187-080		C-CAP,S 5600P-50 KB	C781	87-010-405-080		CAP,E 10-50 M SME
C402	87-010-187-080		C-CAP,S 5600P-50 KB	C782	87-010-405-080		CAP,E 10-50 M SME
C403	87-010-405-080		CAP,E 10-50 M SME	C783	87-015-819-080		C-CAP,0.01-50 KB
C404	87-010-405-080		CAP,E 10-50 M SME	C784	87-010-197-080		C-CAP,S 0.01-25 KB
C405	87-010-260-080		CAP,E 47-25 SME	C785	87-010-400-080		CAP,E 0.47-50 M SME
C406	87-010-101-080		CAP,E 220-16 SME	C786	87-010-400-080		CAP,E 0.47-50 M SME
C407	87-010-188-080		C-CAP,S 6800P-50 KB	C787	87-010-184-080		C-CAP,S 3300P-50 KB
C408	87-010-188-080		C-CAP,S 6800P-50 KB	C788	87-010-184-080		C-CAP,S 3300P-50 KB
C409	87-012-140-080		C-CAP,S 470P-50 J CH	C789	87-010-179-080		C-CAP,S 1200P-50 KB
C410	87-012-140-080		C-CAP,S 470P-50 J CH	C790	87-010-179-080		C-CAP,S 1200P-50 KB
C411	87-010-197-080		C-CAP,S 0.01-25 KB	C791	87-010-405-080		CAP,E 10-50 M SME
C412	87-010-197-080		C-CAP,S 0.01-25 KB	C793	87-010-178-080		C-CAP,S 1000P-50 KB
C413	87-010-195-080		C-CAP,S 0.068-25 ZF C2012	C794	87-010-406-080		CAP,E 22-50 M SME
C414	87-010-195-080		C-CAP,S 0.068-25 ZF C2012	C795	87-010-596-080		C-CAP,S 0.047-16 KR
C415	87-010-404-080		CAP,E 4.7-50 M SME	C796	87-010-403-080		CAP,E 3.3-50 M SME
C416	87-010-404-080		CAP,E 4.7-50 M SME	C797	87-010-180-080		C-CAP,S 1500P-50 KB<HE>
C417	87-010-404-080		CAP,E 4.7-50 M SME	C797	87-010-182-080		C-CAP,S 2200P-50 KB<LH>
C418	87-010-404-080		CAP,E 4.7-50 M SME	C798	87-010-180-080		C-CAP,S 1500P-50 KB<HE>
C421	87-010-401-080		CAP,E 1-50 M SME	C798	87-010-182-080		C-CAP,S 2200P-50 KB<LH>
C422	87-010-401-080		CAP,E 1-50 M SME	C799	87-010-194-080		C-CAP,S 0.047-25 ZF
C516	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	C812	87-010-197-080		C-CAP,S 0.01-25 KB
C605	87-010-180-080		C-CAP,S 1500P-50 KB	C813	87-010-197-080		C-CAP,S 0.01-25 KB
C606	87-010-180-080		C-CAP,S 1500P-50 KB	C814	87-010-197-080		C-CAP,S 0.01-25 KB
C611	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	C815	87-010-197-080		C-CAP,S 0.01-25 KB
C615	87-010-183-080		C-CAP,S 2700P-50 KB	C816	87-010-197-080		C-CAP,S 0.01-25 KB
C619	87-010-263-080		CAP,E 100-10 SME	C819	87-010-197-080		C-CAP,S 0.01-25 KB
C620	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	C820	87-010-408-080		CAP,E 47-50 SME
C621	87-010-263-080		CAP,E 100-10 SME	C821	87-010-197-080		C-CAP,S 0.01-25 KB
C622	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	C822	87-010-197-080		C-CAP,S 0.01-25 KB
C623	87-010-194-080		C-CAP,S 0.047-25 ZF	C823	87-010-197-080		C-CAP,S 0.01-25 KB
C629	87-012-368-080		C-CAP,S 0.1-50 ZF	C828	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
C646	87-010-322-080		C-CAP,S 100P-50 J CH	C829	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
C647	87-010-322-080		C-CAP,S 100P-50 J CH	C959	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
C701	87-010-381-080		CAP,E 330-16 SME	C960	87-010-196-080		C-CAP,S 0.1-25 ZF C2012
C702	87-010-404-080		CAP,E 4.7-50 M SME	C961	87-010-152-080		C-CAP,S 8P-50 D CH
C703	87-010-197-080		C-CAP,S 0.01-25 KB	CF801	87-008-261-010		FLTR,CFSFE10.7MA5
C704	87-010-197-080		C-CAP,S 0.01-25 KB	CF802	87-008-261-010		FLTR,CFSFE10.7MA5
C711	87-010-263-080		CAP,E 100-10 SME	FFE801	A8-72A-290-030		72A-2 FEUNM
C712	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	J252	87-A60-024-010		JACK,DIA6.3 BLK ST W/SW KM
C713	87-010-197-080		C-CAP,S 0.01-25 KB	J253	87-099-474-010		JACK,PIN 3P BLK W/SW
C714	87-010-197-080		C-CAP,S 0.01-25 KB	J254	87-A60-238-010		TERMINAL,SP 4P(MSC)
C721	87-010-312-080		C-CAP,S 15P-50 J CH	J601	87-099-625-010		JACK,PIN 4P BLK W/O SW

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
J801	87-A60-202-010		TERMINAL, ANT 4P MSP-154V-02	C382	87-010-196-080		C-CAP, S 0.1-25 ZF C2012
L201	87-003-383-010		COIL, 1UH K	C383	87-010-196-080		C-CAP, S 0.1-25 ZF C2012
L202	87-003-383-010		COIL, 1UH K	C384	87-010-196-080		C-CAP, S 0.1-25 ZF C2012
L301	87-A50-049-010		COIL, TRAP 85K(COI)	C385	87-010-196-080		C-CAP, S 0.1-25 ZF C2012
L302	87-A50-049-010		COIL, TRAP 85K(COI)	C386	87-010-196-080		C-CAP, S 0.1-25 ZF C2012
L351	87-007-342-010		COIL, OSC 85KHZ BIAS	C387	87-010-196-080		C-CAP, S 0.1-25 ZF C2012
L601	87-003-231-080		C-COIL, S 1UH	C403	87-010-596-080		C-CAP, S 0.047-16 KR
L770	87-005-847-080		COIL, 2.2UH K CECS	C404	87-010-596-080		C-CAP, S 0.047-16 KR
L771	87-A50-165-010		COIL, FM DET-N(TOK)	C405	87-010-401-040		CAP, E 1-50 M SME
L772	87-A90-245-010		FLTR, CFAZH-450(TOK)	C406	87-010-401-040		CAP, E 1-50 M SME
L791	87-A50-027-010		COIL, 1 POLE MPX(TOK)<HE>	C407	87-010-184-080		C-CAP, S 3300P-50 KB
L791	87-003-293-010		COIL, TRAP MPX<LH>	C408	87-010-184-080		C-CAP, S 3300P-50 KB
L792	87-A50-027-010		COIL, 1 POLE MPX(TOK)<HE>	C409	87-010-592-080		C-CAP, S 0.022-16 KR
L792	87-003-293-010		COIL, TRAP MPX<LH>	C410	87-010-592-080		C-CAP, S 0.022-16 KR
L832	87-005-847-080		COIL, 2.2UH K CECS	C411	87-A10-201-080		C-CAP, S 0.33-16 KB
L981	87-NF4-650-010		COIL, AM PACK4N(TOK)	C412	87-A10-201-080		C-CAP, S 0.33-16 KB
PR201	87-026-682-080		PROTECTOR, 10A 491SERIES 60V	C413	87-A10-264-080		C-CAP, S 0.1-16 ZF
PR202	87-026-682-080		PROTECTOR, 10A 491SERIES 60V	C414	87-010-374-040		CAP, E 47-10 SME
R229	87-022-184-080		RES, M/F 0.33-1W J	C415	87-010-374-040		CAP, E 47-10 SME
R230	87-022-184-080		RES, M/F 0.33-1W J	C416	87-A10-264-080		C-CAP, S 0.1-16 ZF
R231	87-022-184-080		RES, M/F 0.33-1W J	C417	87-016-081-080		C-CAP, S 0.1-16 KR
R232	87-022-184-080		RES, M/F 0.33-1W J	C418	87-010-405-040		CAP, E 10-50 M SME
R644	83-XM1-617-080		C-COIL, BK2125HM601	C501	87-010-319-080		C-CAP, S 56P-50 J CH
RY101	87-045-389-010		RELAY, 12V OSA-SS-212DM5	C502	87-010-319-080		C-CAP, S 56P-50 J CH
RY201	87-045-382-010		RELAY, 12V OUAZ-SH-112L	C503	87-016-460-080		C-CAP, S 0.22-16 KB
SFR301	87-024-435-080		SFR, 33K H RH063MC	C504	87-010-190-080		C-CAP, S 0.01-50 ZF C2012
SFR302	87-024-435-080		SFR, 33K H RH063MC	C505	87-010-180-080		C-CAP, S 1500P-50 KB
SFR303	87-024-435-080		SFR, 33K H RH063MC	C506	87-010-213-080		C-CAP, S 0.015-25 KB
SFR304	87-024-435-080		SFR, 33K H RH063MC	C507	87-010-213-080		C-CAP, S 0.015-25 KB
SFR305	87-024-436-080		SFR, 47K H RH063MC	C508	87-010-197-080		C-CAP, S 0.01-25 KB
SFR306	87-024-436-080		SFR, 47K H RH063MC	C509	87-010-181-080		C-CAP, S 1800P-50 KB
SFR351	87-024-436-080		SFR, 47K H RH063MC	C510	87-010-196-080		C-CAP, S 0.1-25 ZF C2012
SFR352	87-024-436-080		SFR, 47K H RH063MC	C511	87-018-209-080		CAP, TC U 0.1-50 ZF UP050
TH201	87-A90-221-080		C-THMS, 100K	C512	87-010-408-040		CAP, E 47-50 M SME
TH202	87-A90-221-080		C-THMS, 100K	C513	87-010-401-040		CAP, E 1-50 M SME
W1	85-NF5-628-010		F-CABLE, 7P-2.5	C514	87-010-401-040		CAP, E 1-50 M SME
W602	88-906-271-110		FF-CABLE, 6P 1.25	C515	87-010-184-080		C-CAP, S 3300P-50 KB
X721	87-A70-061-010		VIB, XTAL 4.500MHZ CSA-309	C516	87-010-184-080		C-CAP, S 3300P-50 KB
				C518	87-010-196-080		C-CAP, S 0.1-25 ZF C2012
				C519	87-010-263-040		CAP, E 100-10 M SME
FRONT C.B				C520	87-010-318-080		C-CAP, S 47P-50 J CH
C101	87-010-198-080		C-CAP, S 0.022-25 KB	C521	87-010-318-080		C-CAP, S 47P-50 J CH
C102	87-010-198-080		C-CAP, S 0.022-25 KB	C601	87-010-405-040		CAP, E 10-50 M SME
C103	87-010-197-080		C-CAP, S 0.01-25 KB	C602	87-010-186-080		C-CAP, S 4700P-50 KB
C104	87-010-320-080		C-CAP, S 68P-50 J CH	C603	87-010-498-040		CAP, E 10-16 M 5L SRE
C105	87-010-316-080		C-CAP, S 33P-50 J CH	C604	87-010-406-040		CAP, E 22-50 M SME
C106	87-010-178-080		C-CAP, S 1000P-50 KB	C607	87-010-321-080		C-CAP, S 82P-50 J CH
C107	87-012-157-080		C-CAP, S 330P-50 J CH GRM	C608	87-010-196-080		C-CAP, S 0.1-25 ZF C2012
C108	87-010-405-040		CAP, E 10-50 M SME	C609	87-010-491-040		CAP, E 0.22-50 5L SRE
C109	87-010-401-040		CAP, E 1-50 M SME	C611	87-010-177-080		C-CAP, S 820P-50 J SL
C110	87-010-196-080		C-CAP, S 0.1-25 ZF C2012	C612	87-010-994-080		C-CAP, S 680P-50 J CH
C111	87-010-196-080		C-CAP, S 0.1-25 ZF C2012	C614	87-A10-189-040		CAP, E 220-10 M
C112	87-010-196-080		C-CAP, S 0.1-25 ZF C2012	FB601	87-008-372-080		FLTR, EMIBL01 RN1
C113	87-A10-189-040		CAP, E 220-10 M	FL101	87-MA5-614-010		FL, BJ542GK
C114	87-010-196-080		C-CAP, S 0.1-25 ZF C2012	L501	87-005-448-080		COIL, 220UH K FLR50
C115	87-010-178-080		C-CAP, S 1000P-50 KB	LED201	87-017-785-080		LED, SEL4214S RED
C116	87-010-494-040		CAP, E 1-50 5L SRE	LED202	87-017-785-080		LED, SEL4214S RED
C117	87-010-263-080		CAP, E 100-10 M SME	LED203	87-017-785-080		LED, SEL4214S RED
C118	87-010-194-080		C-CAP, S 0.047-25 ZF	LED204	87-017-785-080		LED, SEL4214S RED
C119	87-010-408-080		CAP, E 47-50 M SME	LED205	87-017-785-080		LED, SEL4214S RED
C120	87-010-404-080		CAP, E 4.7-50 SME	LED206	87-017-731-080		LED, SEL1510CM2 PGRN
C121	87-010-404-080		CAP, E 4.7-50 SME	LED207	87-017-731-080		LED, SEL1510CM2 PGRN
C122	87-010-194-080		C-CAP, S 0.047-25 ZF	LED208	87-017-731-080		LED, SEL1510CM2 PGRN
C123	87-010-196-080		C-CAP, S 0.1-25 ZF C2012	LED209	87-017-731-080		LED, SEL1510CM2 PGRN
C124	87-010-196-080		C-CAP, S 0.1-25 ZF C2012	LED210	87-017-731-080		LED, SEL1510CM2 PGRN
C125	87-010-196-080		C-CAP, S 0.1-25 ZF C2012	LED211	87-017-731-080		LED, SEL1510CM2 PGRN
C126	87-010-312-080		C-CAP, S 15P-50 J CH	LED212	87-017-731-080		LED, SEL1510CM2 PGRN
C127	87-018-209-080		CAP, TC U 0.1-50 ZF UP050	LED213	87-017-731-080		LED, SEL1510CM2 PGRN
C201	87-010-196-080		C-CAP, S 0.1-25 ZF C2012	LED214	87-017-731-080		LED, SEL1510CM2 PGRN
C381	87-012-158-080		C-CAP, S 390P-50 J CH GRM	LED215	87-017-731-080		LED, SEL1510CM2 PGRN

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
LED216	87-017-731-080	LED,SEL1510CM2	PGRN
LED217	87-017-731-080	LED,SEL1510CM2	PGRN
LED218	87-017-731-080	LED,SEL1510CM2	PGRN
LED219	87-017-731-080	LED,SEL1510CM2	PGRN
LED220	87-017-731-080	LED,SEL1510CM2	PGRN
LED221	87-017-731-080	LED,SEL1510CM2	PGRN
LED233	87-070-270-010	LED,SEL1510CM2-LF34	P-GRN
LED234	87-070-270-010	LED,SEL1510CM2-LF34	P-GRN
LED235	87-070-270-010	LED,SEL1510CM2-LF34	P-GRN
LED236	87-070-270-010	LED,SEL1510CM2-LF34	P-GRN
LED237	87-070-300-010	LED,SEL1250SMLF34	RED
LED238	87-070-300-010	LED,SEL1250SMLF34	RED
LED241	87-017-785-080	LED,SEL4214S	RED
LED242	87-017-785-080	LED,SEL4214S	RED
LED243	87-017-785-080	LED,SEL4214S	RED
LED244	87-017-785-080	LED,SEL4214S	RED
LED245	87-017-785-080	LED,SEL4214S	RED
LED246	87-017-785-080	LED,SEL4214S	RED
LED247	87-017-785-080	LED,SEL4214S	RED
LED248	87-017-785-080	LED,SEL4214S	RED
LED249	87-017-785-080	LED,SEL4214S	RED
LED250	87-017-785-080	LED,SEL4214S	RED
R301	87-022-355-080	C-RES, S 10K-1/10W	F
R321	87-022-355-080	C-RES, S 10K-1/10W	F
R341	87-022-355-080	C-RES, S 10K-1/10W	F
S301	87-A90-164-080	SW,TACT SKQNAB(N)	
S302	87-A90-164-080	SW,TACT SKQNAB(N)	
S303	87-A90-164-080	SW,TACT SKQNAB(N)	
S304	87-A90-164-080	SW,TACT SKQNAB(N)	
S305	87-A90-164-080	SW,TACT SKQNAB(N)	
S306	87-A90-164-080	SW,TACT SKQNAB(N)	
S307	87-A90-164-080	SW,TACT SKQNAB(N)	
S308	87-A90-164-080	SW,TACT SKQNAB(N)	
S309	87-A90-164-080	SW,TACT SKQNAB(N)	
S321	87-A90-164-080	SW,TACT SKQNAB(N)	
S322	87-A90-164-080	SW,TACT SKQNAB(N)	
S323	87-A90-164-080	SW,TACT SKQNAB(N)	
S324	87-A90-164-080	SW,TACT SKQNAB(N)	
S325	87-A90-164-080	SW,TACT SKQNAB(N)	
S328	87-A90-164-080	SW,TACT SKQNAB(N)	
S329	87-A90-164-080	SW,TACT SKQNAB(N)	
S330	87-A90-164-080	SW,TACT SKQNAB(N)	
S331	87-A90-164-080	SW,TACT SKQNAB(N)	
S332	87-A90-164-080	SW,TACT SKQNAB(N)	
S333	87-A90-164-080	SW,TACT SKQNAB(N)	
S334	87-A90-164-080	SW,TACT SKQNAB(N)	
S335	87-A90-164-080	SW,TACT SKQNAB(N)	
S336	87-A90-164-080	SW,TACT SKQNAB(N)	
S341	87-A90-164-080	SW,TACT SKQNAB(N)	
S342	87-A90-164-080	SW,TACT SKQNAB(N)	
S349	87-A90-164-080	SW,TACT SKQNAB(N)	
S350	87-A90-164-080	SW,TACT SKQNAB(N)	
S351	87-A90-164-080	SW,TACT SKQNAB(N)	
S352	87-A90-164-080	SW,TACT SKQNAB(N)	
SW101	87-A90-461-010	SW,RTRY EVQVBCFK124B	
W104	88-914-251-110	FF-CABLE,14P 1.25 250MM	
W501	85-MA2-602-010	CABLE FFC,15P-1.25	
X201	87-A70-070-080	VIB,CER 5.76MHZ CRHF	

MIC C.B

C605	87-018-209-080	CAP,TC U 0.1-50 ZF UP050
J601	87-099-659-010	JACK,6.3 0
J602	87-099-659-010	JACK,6.3 0

CD KEY C.B

S310	87-A90-164-080	SW,TACT SKQNAB(N)
S311	87-A90-164-080	SW,TACT SKQNAB(N)
S312	87-A90-164-080	SW,TACT SKQNAB(N)

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
S313	87-A90-164-080	SW,TACT SKQNAB(N)	
S314	87-A90-164-080	SW,TACT SKQNAB(N)	
S315	87-A90-164-080	SW,TACT SKQNAB(N)	
S316	87-A90-164-080	SW,TACT SKQNAB(N)	

DECK C.B

CON502	87-099-756-010	CONN,15P 9604S F
SFR1	87-024-581-010	SFR,3.3K DIA 6H
SOL1	82-ZM1-626-010	SOL ASSY,27K
SOL2	82-ZM1-626-010	SOL ASSY,27K
SW1	87-036-110-010	SW,MICRO SPPB62

SW2	87-036-110-010	SW,MICRO SPPB62
SW3	87-036-110-010	SW,MICRO SPPB62
SW4	87-036-110-010	SW,MICRO SPPB62
SW5	87-A90-248-010	SW,MICRO ESE11SH2CXQ
SW6	87-A90-248-010	SW,MICRO ESE11SH2CXQ

SW8	87-A90-248-010	SW,MICRO ESE11SH2CXQ
SW9	87-A90-248-010	SW,MICRO ESE11SH2CXQ
W1	82-ZM3-601-010	RBN-CORD,4P-75

HEAD-1 C.B

85-ZM3-601-110	PWB,FLEX I
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HEAD-2 C.B

CON351	83-NEG-608-010	CONN ASSY,8P-RPB
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AC2 C.B

⚠ PR1	87-026-682-080	PROTECTOR,10A 491SERIES 60V
⚠ PR2	87-026-682-080	PROTECTOR,10A 491SERIES 60V
⚠ PR5	87-026-682-080	PROTECTOR,10A 491SERIES 60V
⚠ PR6	87-026-682-080	PROTECTOR,10A 491SERIES 60V

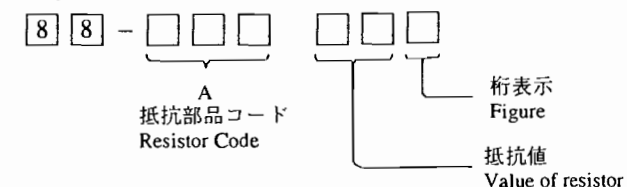
PT C.B

⚠ F102	87-035-369-010	FUSE,5A 250V T
⚠ FC1	87-033-147-010	FUSE CLAMP,MT-20
⚠ FC2	87-033-147-010	FUSE CLAMP,MT-20
⚠ PT101	87-MA5-610-010	PT,7MA-5 HR<HE>
⚠ PT101	87-NF6-625-010	PT,7NF-6 LH<LH>

⚠ SW101	87-A90-165-010	SW,SL 1-2-3 SWS2301
⚠ T1	87-A60-317-010	TERMINAL,1P MSC
⚠ T2	87-A60-317-010	TERMINAL,1P MSC

○ チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code: A
				外形／Form	L	W	t	
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



2SA1296
KTA1266
KTC3198



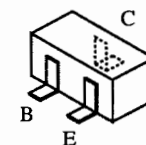
CSD1489
CSB1058



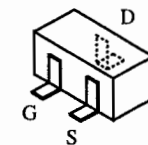
2SA933



C2N5401



2SA1235
2SC2714
2SC3052
CMBT5551
CSA1362
CSD1306



2SK2158

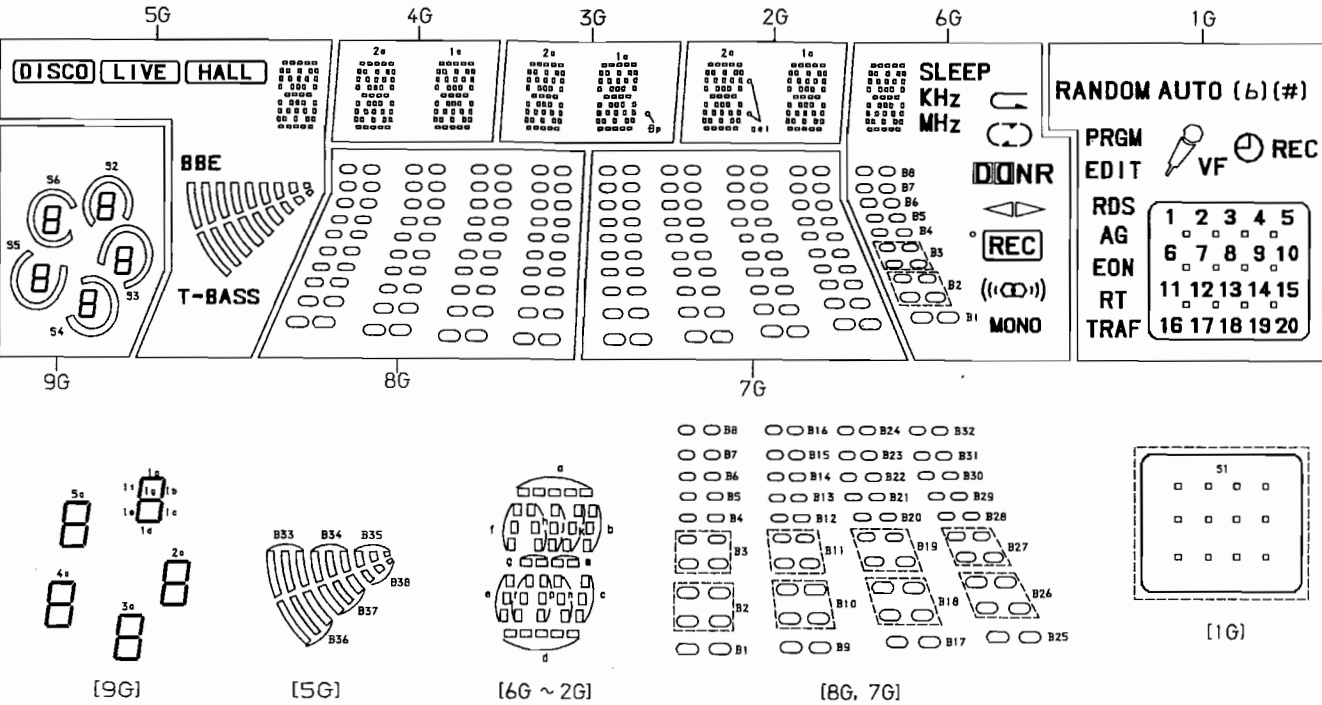


2SB1370
FN1016
FP1016

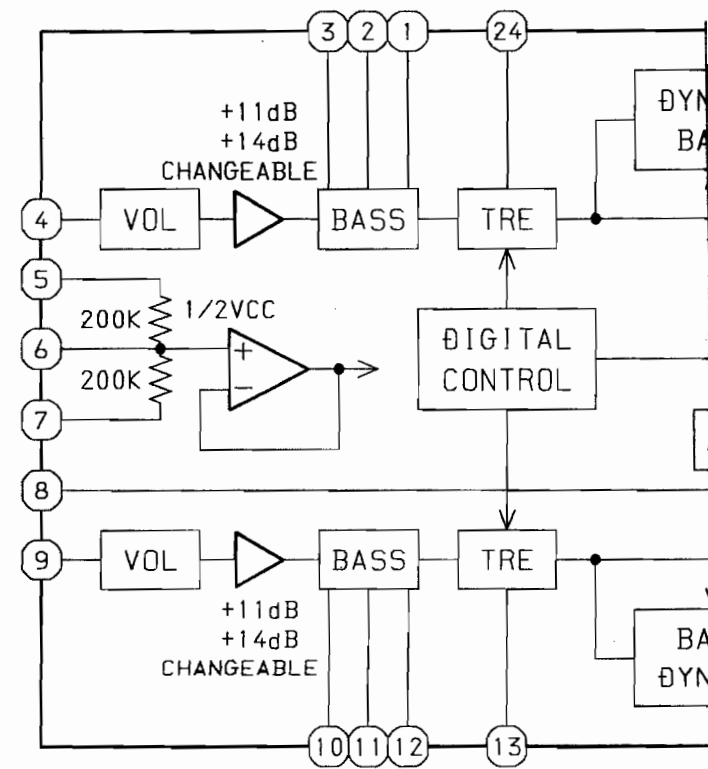


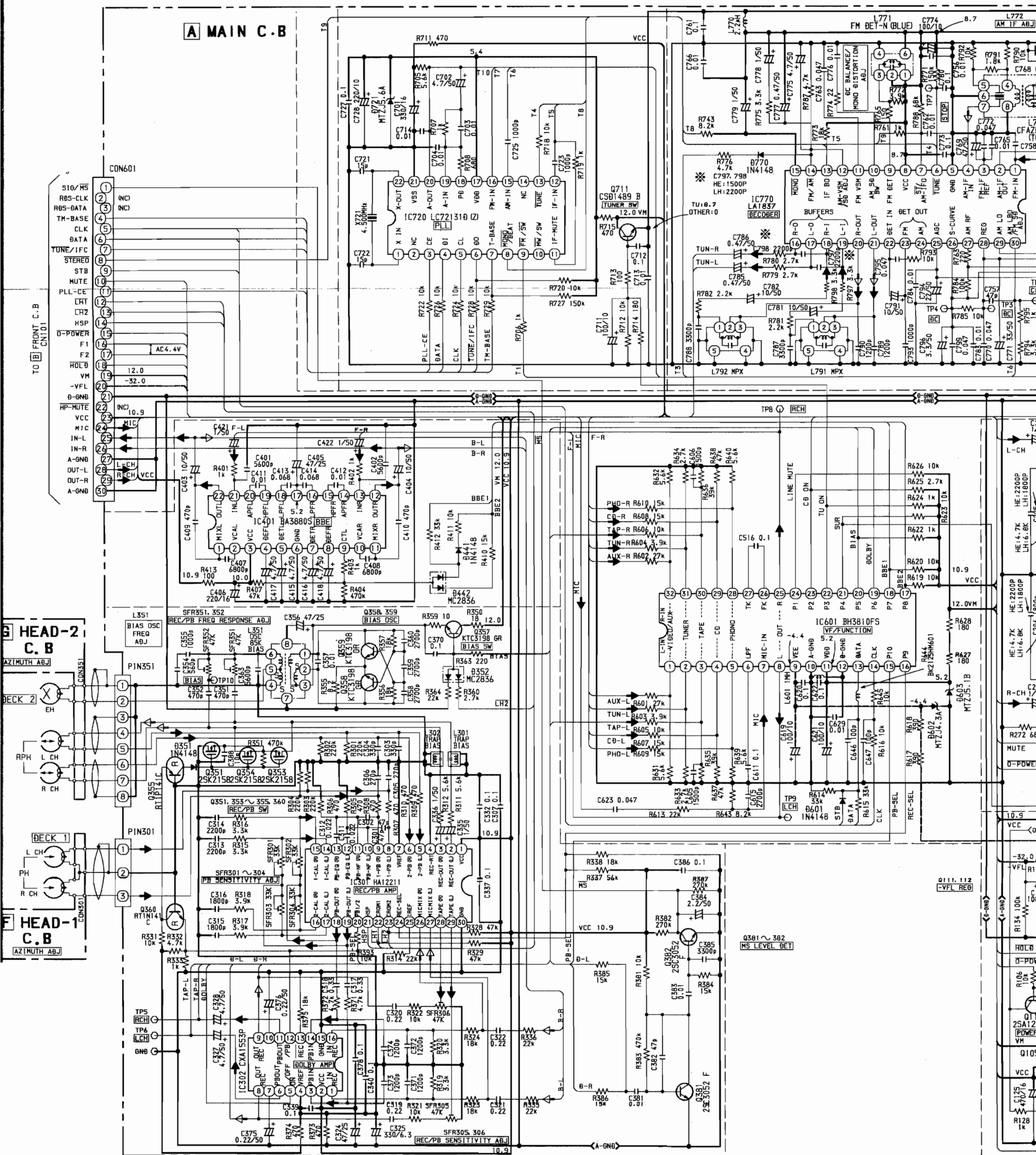
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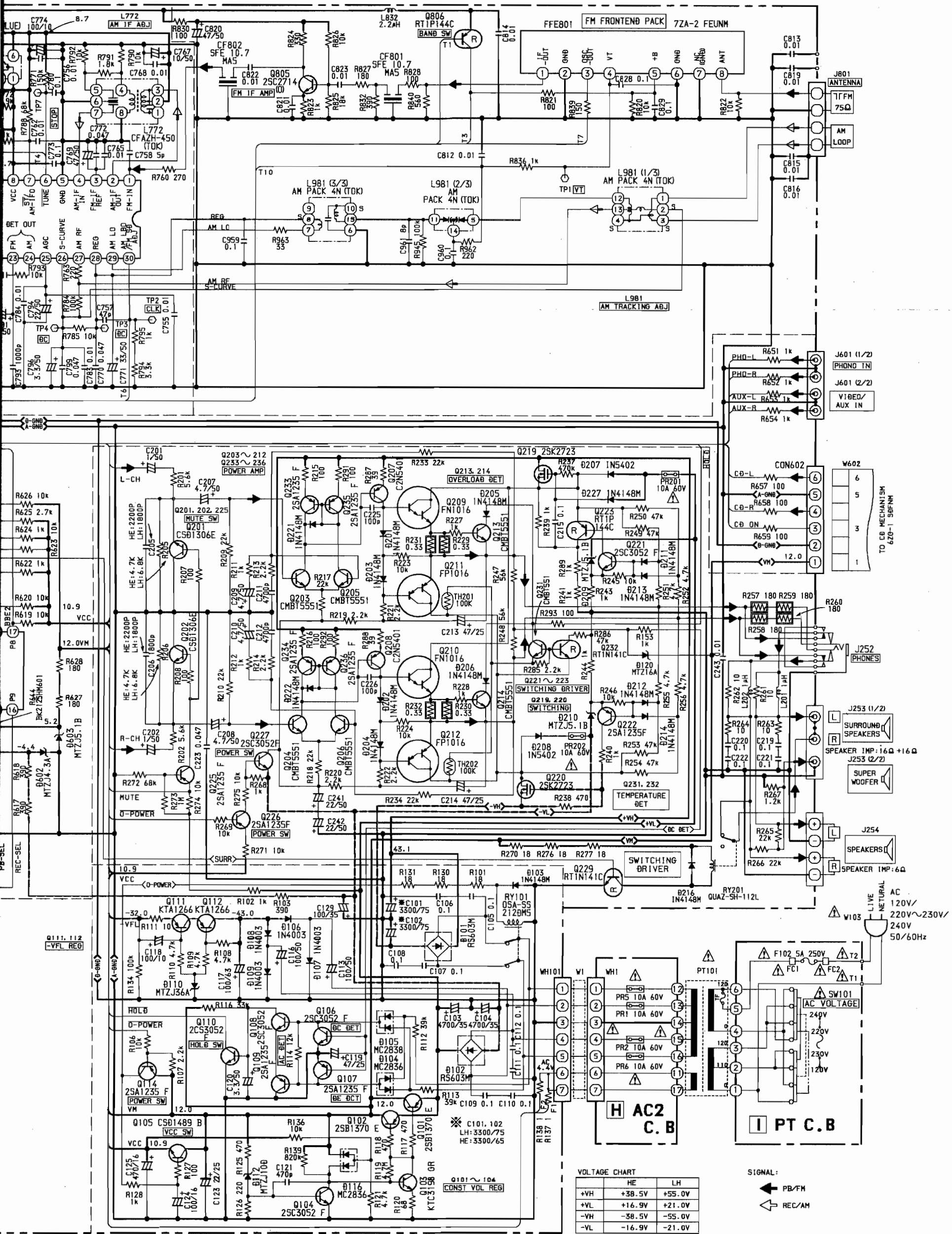
GRID ASSIGNMENT

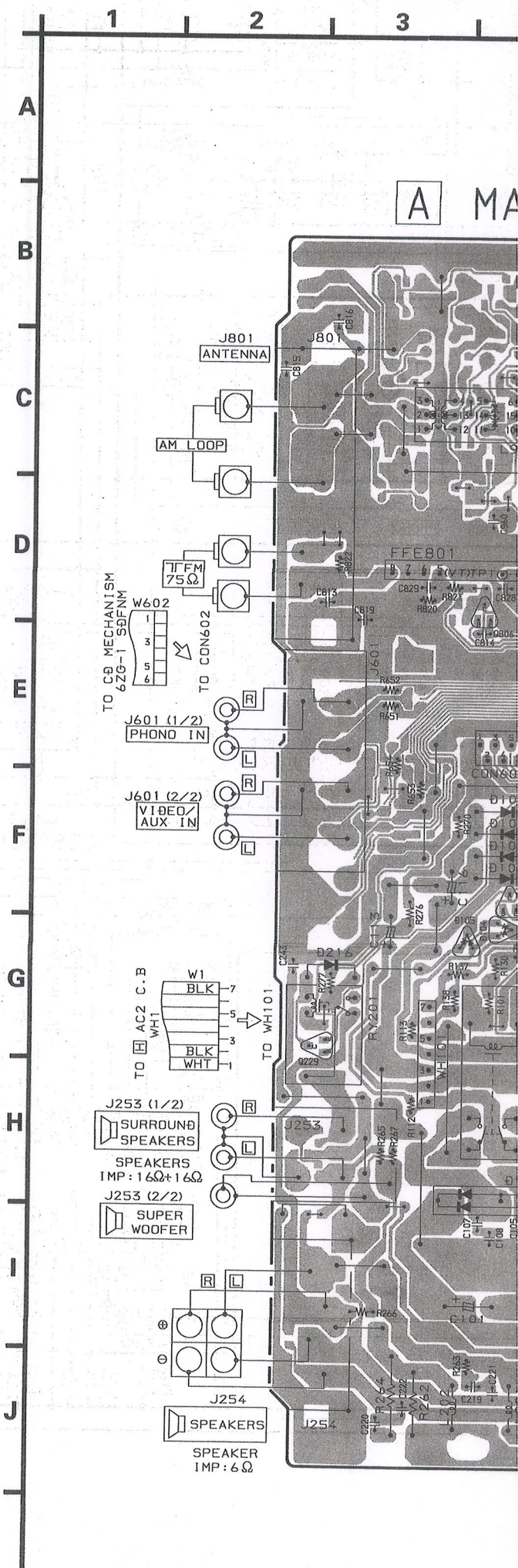
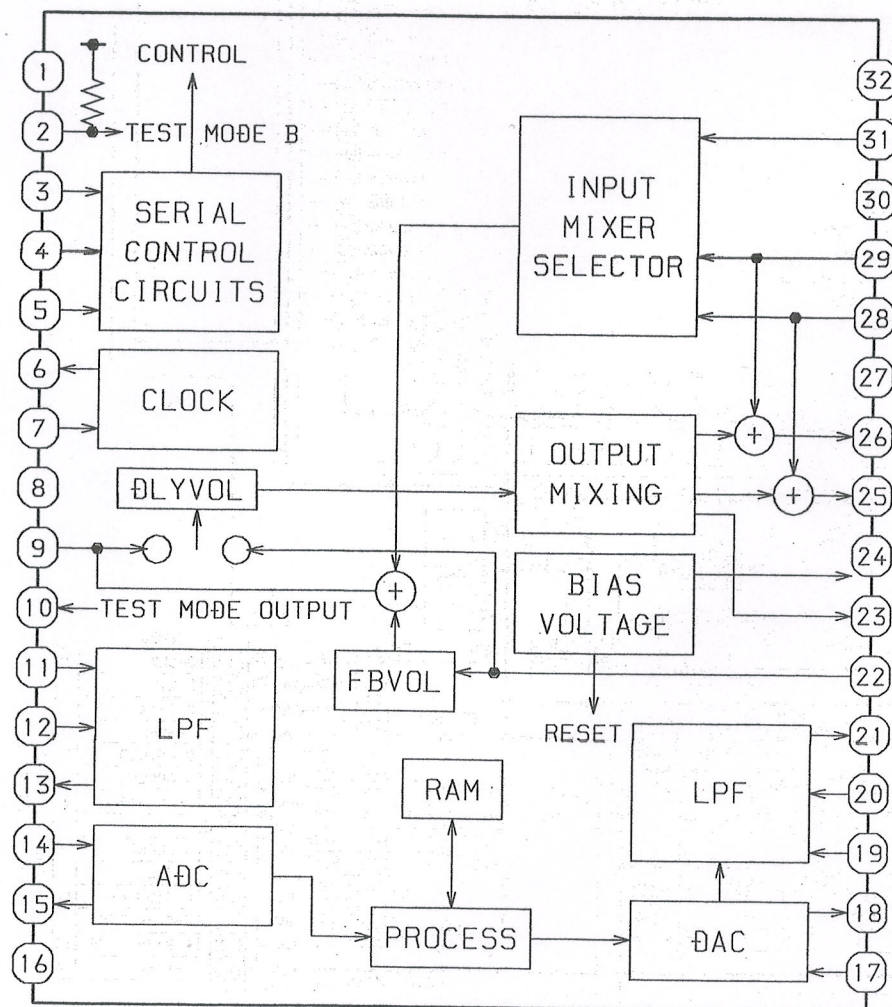
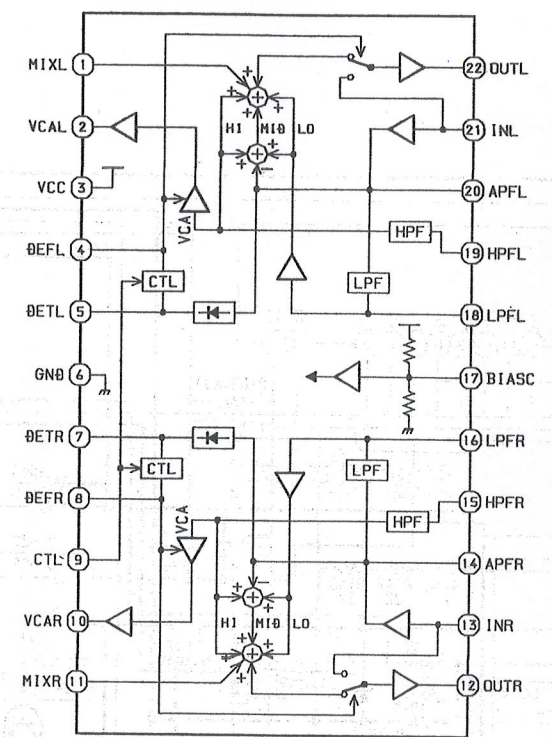
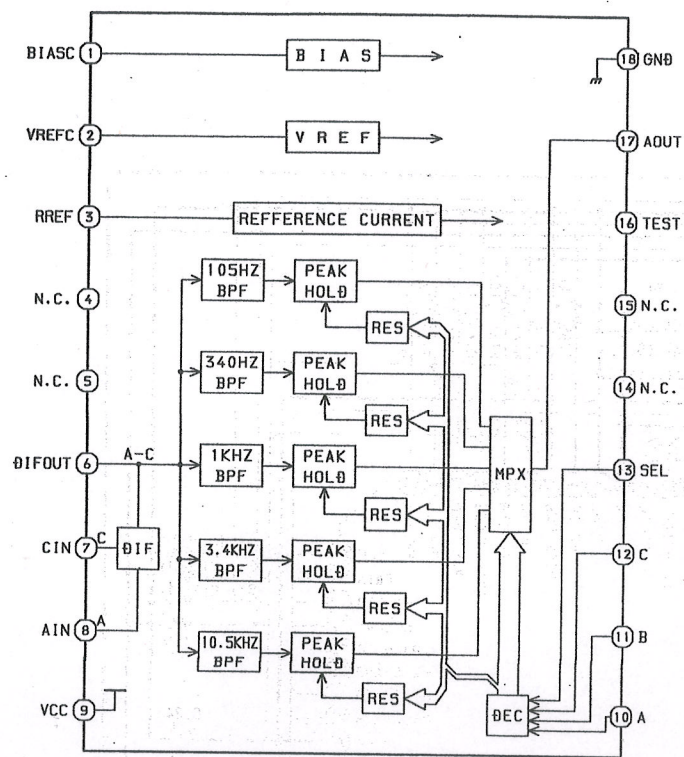


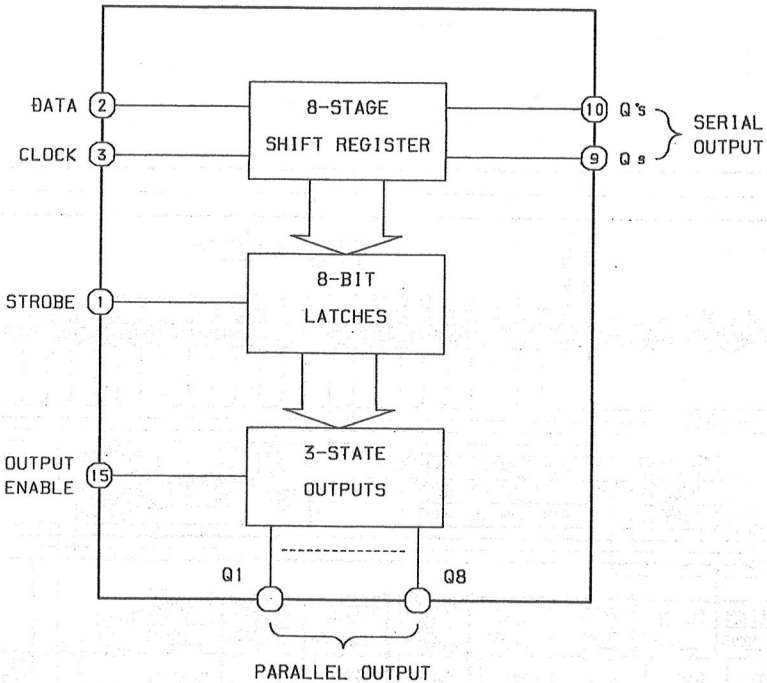
	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	S4	B8	B8	d	d	1d	1d	1d	RANDOM
P2	3e	B16	B16	n	n	1n	1n	1n	PRGM
P3	3c	B24	B24	p	p	1p	1p	1p	EDIT
P4	3g	B32	B32	r	r	1r	1r	1r	S1
P5	3f	B7	B7	e	e	1e	1e	1e	1
P6	3b	B15	B15	c	c	1c	1c	1c	2
P7	3a, 3d	B23	B23	q	q	1q	1q	1q	3
P8	S5/	B31	B31	m	m	1m	1m	1m	4
P9	4e	B6	B6	f	f	1f	1f	1f	5
P10	4c	B14	B14	b	b	1b	1b	1b	6
P11	4g	B22	B22	k	k	1k	1k	1k	7
P12	4f	B30	B30	j	j	1j	1j	1j	8
P13	4b	B5	B5	h	h	1h	1h	1h	9
P14	4a, 4d	B13	B13	a	a	1a	1a	1a	10
P15	S2	B21	B21	NR	B35	-	0p	0p (down)	11
P16	1a, 1d	B29	B29	▷	B34	-	-	0a 1(up)	12
P17	1b	B4	B4	◁	B33	2d	2d	2d	13
P18	1f	B12	B12	○	BBE	2n	2n	2n	14
P19	1g	B20	B20	REC	B38	2p	2p	2p	15
P20	1c	B28	B28	B8	B37	2r	2r	2r	16
P21	1e	B3	B3	B7	B36	2e	2e	2e	17
P22	S6	B11	B11	B6	T-BASS	2c	2c	2c	18
P23	5a, 5d	B19	B19	B5	(HALL)	2g	2g	2g	19
P24	5f	B27	B27	B4	(LIVE)	2m	2m	2m	20
P25	5g	B2	B2	B3	(DISCO)	2f	2f	2f	RDS
P26	5g	B10	B10	B2	DISCO LIVE HALL	2b	2b	2b	AG
P27	5c	B18	B18	B1	-	2k	2k	2k	EON
P28	5e	B26	B26	(MONO)	-	2j	2j	2j	RT
P29	S3	B1	B1	MONO	-	2h	2h	2h	TRAF
P30	2a, 2d	B9	B9	)	-	2a	2a	2a	REC
P31	2b	B17	B17	(	-	-	-	-	⊖
P32	2f	B25	B25	MHz	-	-	-	-	VF
P33	2g	-	-	KHz	-	-	-	-	AUTO
P34	2c	-	-	↶	-	-	-	-	(b)
P35	2e	-	-	SLEEP	-	-	-	-	(#)
P36	-	-	-	-	-	-	-	-	b #
P37	-	-	-	Σ	-	-	-	-	-

[illegible]





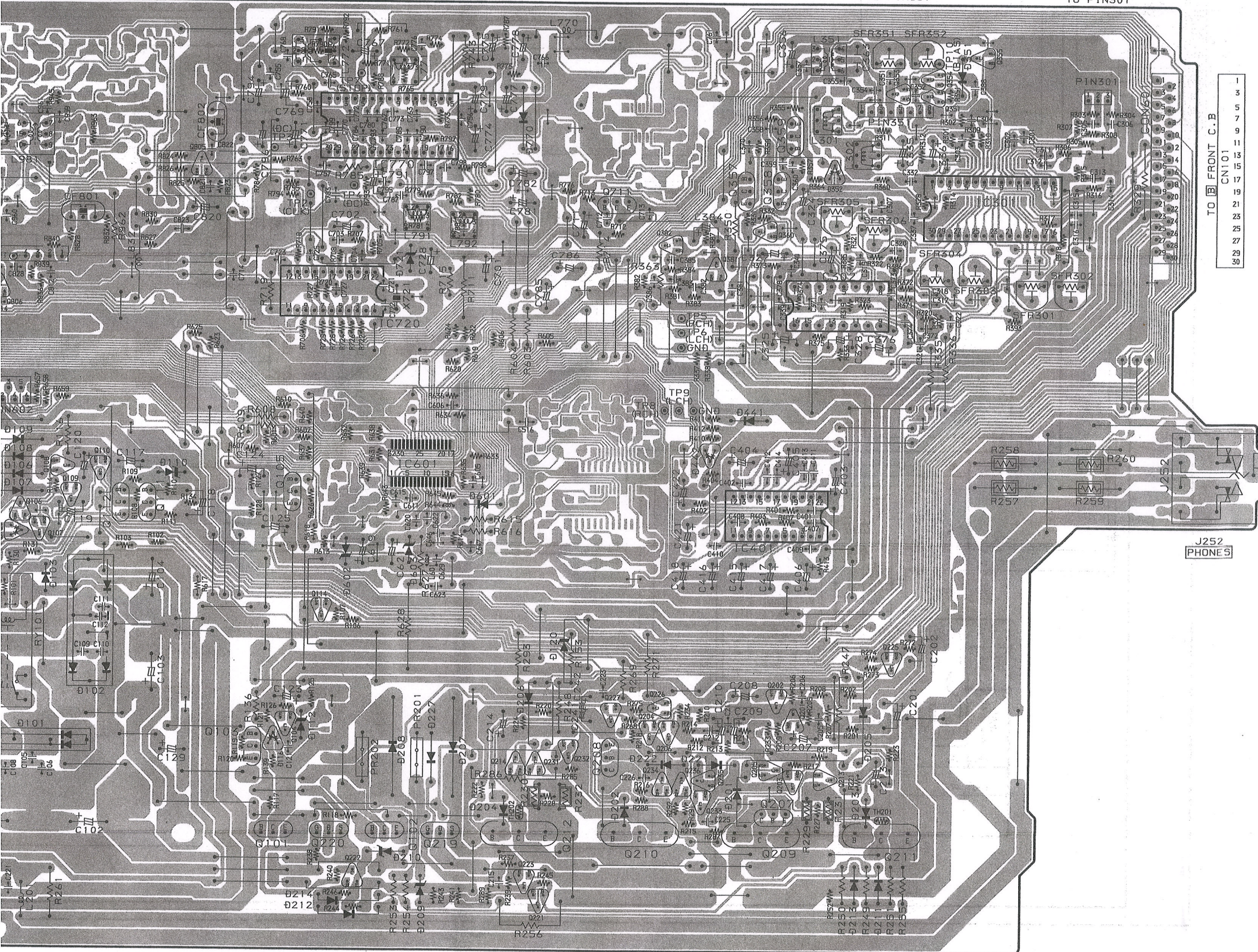


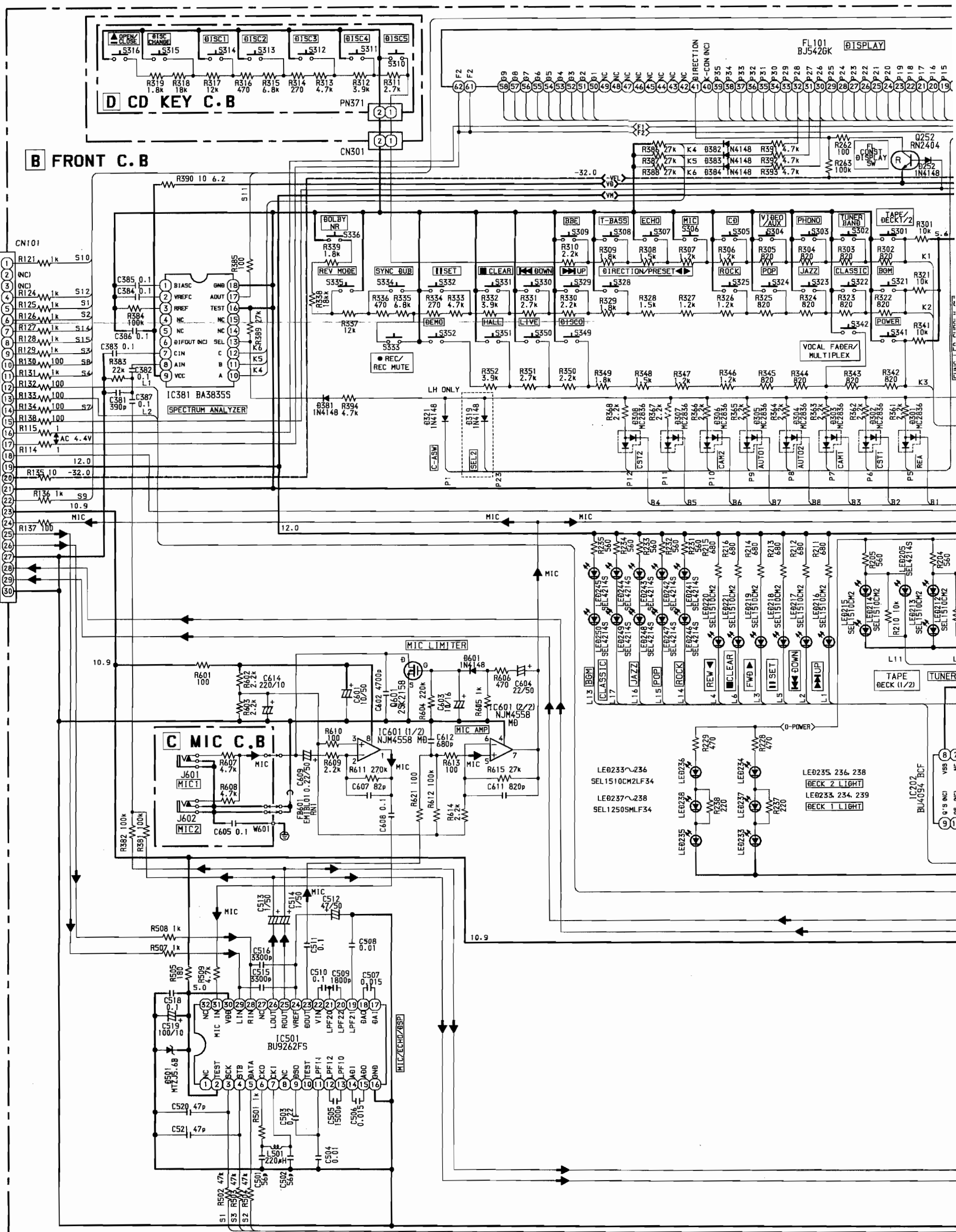


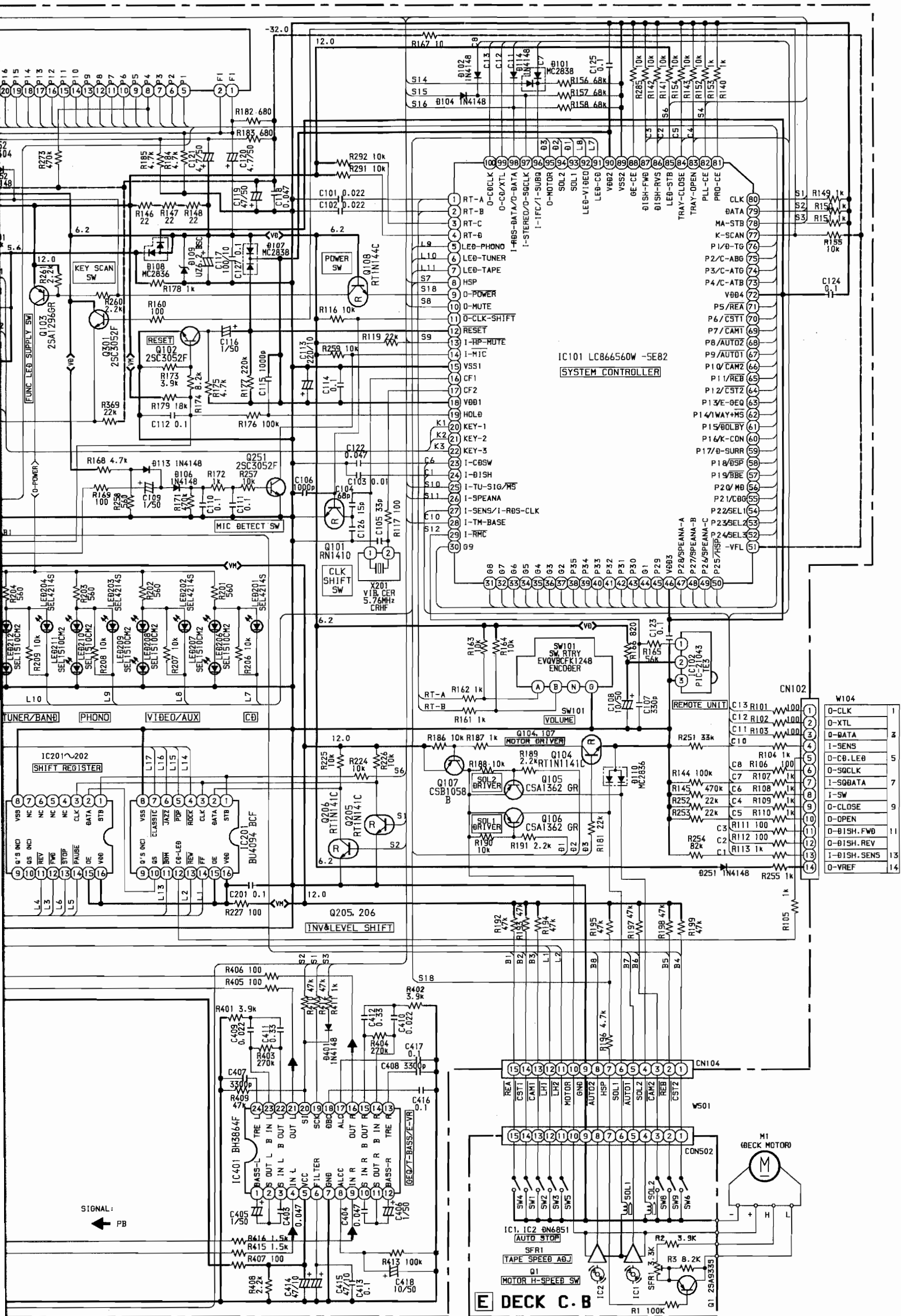
TRUTH TABLE							
CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	Qs	Q's
	L	X	X	Z	Z	Q7	No Chg.
	L	X	X	Z	Z	No Chg.	Qs
	H	L	X	No Chg.	No Chg.	Q7	No Chg.
	H	H	L	L	Qn-1	Q7	No Chg.
	H	H	H	H	Qn-1	Q7	No Chg.
	H	X	X	No Chg.	No Chg.	No Chg.	Qs

Z=High Impedance
X=Don't Care

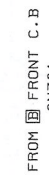
1A IN C.B



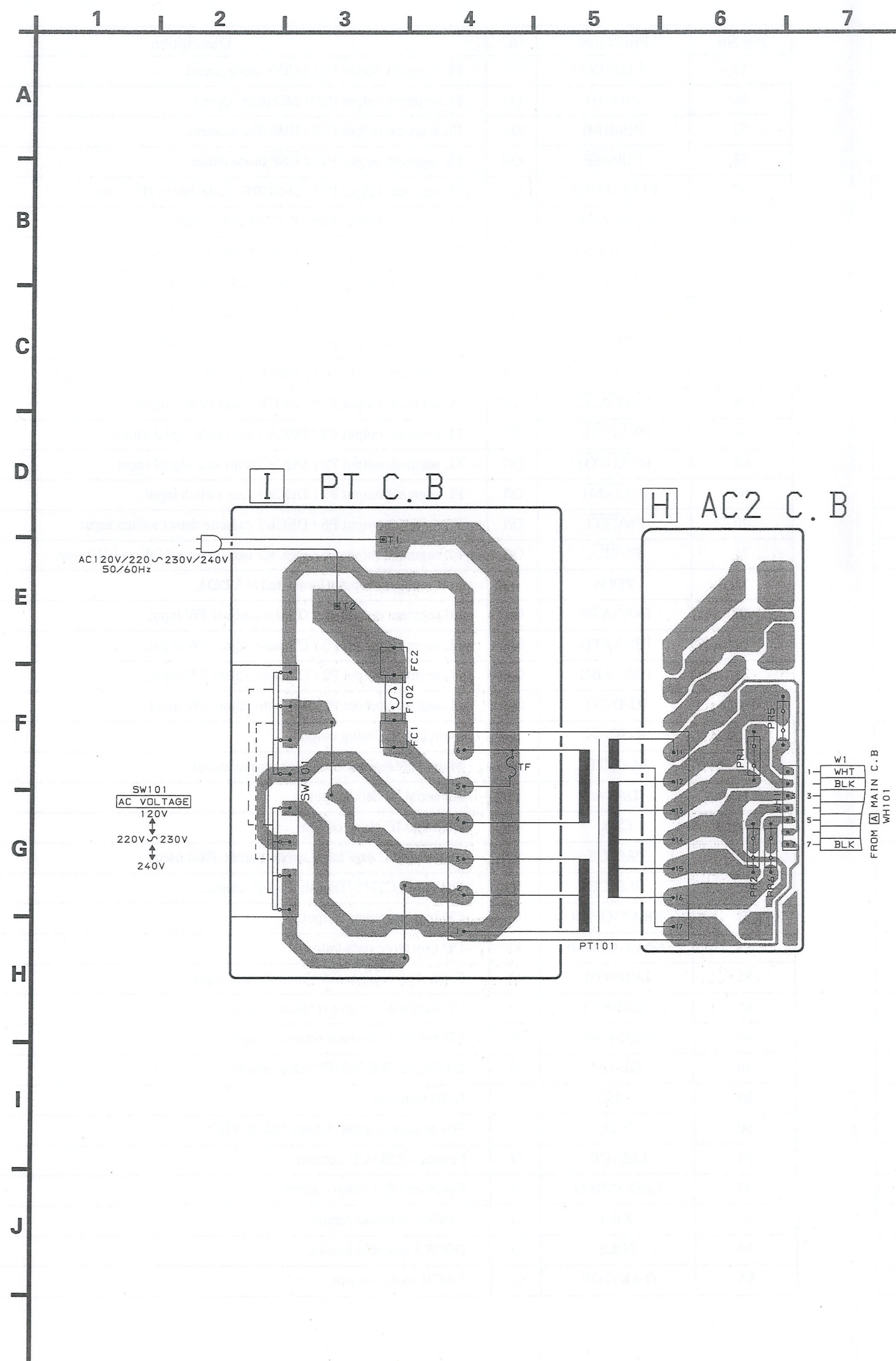




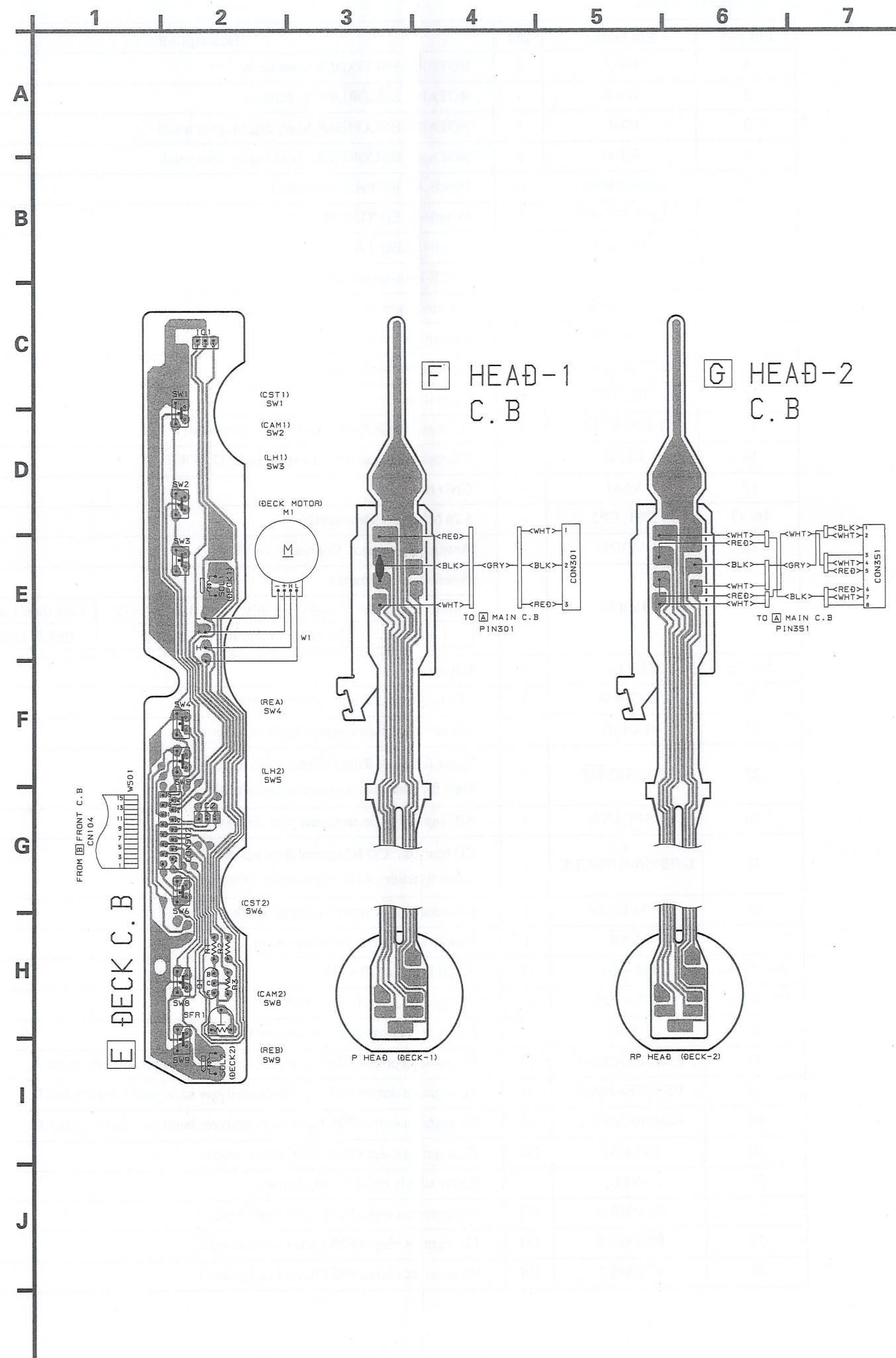
TO CD MECHANISM
620-1 SBFNN



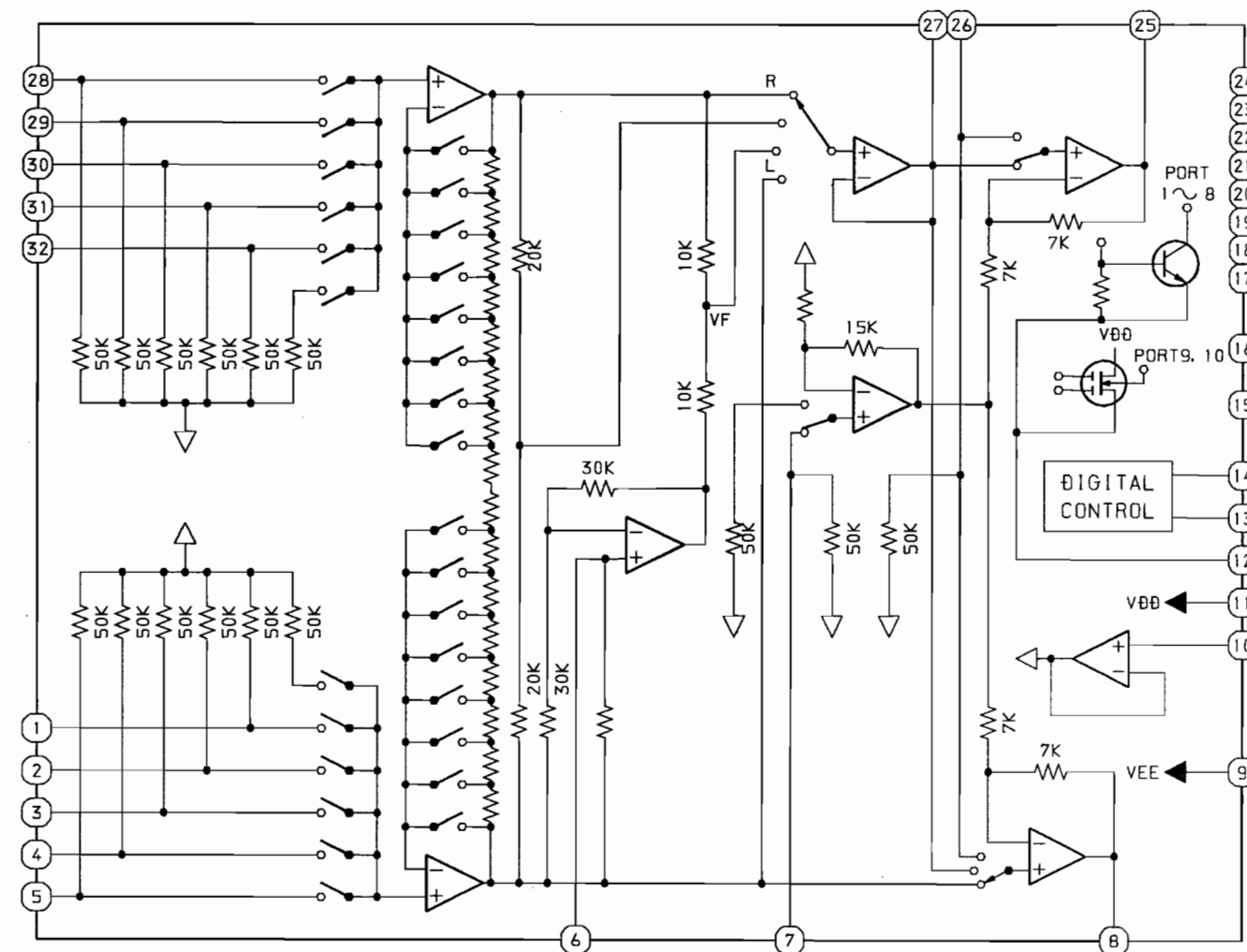
WIRING - 3 (PT/AC2)



WIRING - 4 (DECK / HEAD)



IC BLOCK DIAGRAM – 3
IC,BH3810FS



IC DESCRIPTION
IC, LC866560W-5E82

Pin No.	Pin Name	I/O	Description
1	RT-A	I	ROTARY ENCORDER Volume in.
2	RT-B	I	ROTARY ENCORDER Volume in.
3	RT-C	I	ROTARY ENCORDER Multi Jog in. (Not used)
4	RT-D	I	ROTARY ENCORDER Multi Jog in. (Not used)
5	LED-PHONO	O	Function LED PHONO control.
6	LED-TUNER	O	Function LED TUNER control.
7	LED-TAPE	O	Function LED TAPE control.
8	HSP	O	DECK high-speed dubbing control.
9	O-POWER	O	System power supply ON/OFF output.
10	O-MUTE	O	System mute output.
11	O-CLK-SHIFT	O	Micon clock shift output.
12	RESET	I	Reset input.
13	I-HP-MUTE	I	"L" input PROLOGIC, DSP OFF. (Not used)
14	I-MIC	I	Microphone input for auto vocal fader ON/OFF .
15	VSS1	–	GND terminal.
16, 17	CF1, CF2	–	5.76 MHz oscillator circuit.
18	VDD1	–	Power supply input. Connected to VDD2.
19	HOLD	I	Power failure detected.
			More than 4.9V
			4.9V ~ 3.49V
			3.49V ~ 1.41V
			Less than 1.41V
			P-OFF
20 ~ 22	KEY1 ~ 3	I	Key input.
23	I-CDSW	I	CD mechanical switch A/D converter input.
24	I-DISH	I	CD turntable photo sensor A/D converter input.
25	I-TU-SIG/MS	I	Tuner function: Tuner SD detected input. Tape function: Deck music sensor signal input.
26	I-SPEANA	I	A/D input for spectrum analyzer display.
27	I-SENS/I-RDS-CLK	I	CD function: CD IC control data bus data input. Tuner function: RDS clock input. (Not used)
28	I-TM BASE	I	Reference clock input for timer watch.
29	I-RMC	I	System remote control signal input.
30 ~ 37, 44	G9 ~ G1	O	FL grid output G9 ~ G1.
38 ~ 43, 45	P35 ~ P29	O	FL segment output P35 ~ P29.
46	VDD3	–	Power supply input. Connected to VDD4.
47	P28/SPEANA-A	O	FL segment output P28 / spectrum analyzer band pass filter control A.
48	P27/SPEANA-B	O	FL segment output P27 / spectrum analyzer hand pass filter control B.
49	P26/SPEANA-C	O	FL segment output P26 / spectrum analyzer band pass filter control C.
50	P25/HSP	O/I	FL segment output P25 / HSP diode detect.
51	–VFL	–	Power supply input for FL display.
52	P24/SEL3	O/I	FL segment output P24 / tuner band select 3.
53	P23/SEL2	O/I	FL segment output P23 / tuner band select 2.
54	P22/SEL1	O/I	FL segment output P22 / tuner band select 1.

Pin No.	Pin Name	I/O	Description
55	P21/CDG	O/I	FL segment output P21 / CDG diode detect.
56	P20/MD	O/I	FL segment output P20 / MD diode detect.
57	P19/BBE	O/I	FL segment output P19 / BBE diode detect.
58	P18/DSP	O/I	FL segment output P18 / DSP diode detect.
59	P17/D-SURR	O/I	FL segment output P17 / D-SURR diode detect. (Not used)
60	P16/K-CON	O/I	FL segment output P16 / K-CON diode detect.
61	P15/DOLBY	O/I	FL segment output P15 / DOLBY-NR diode detect.
62	P14/1WAY+MS	O/I	FL segment output P14 / 1WAY+MS diode detect.
63	P13/E-GEQ	O/I	FL segment output P13 / E-GEQ diode detect.
64	P12/CST2	O/I	FL segment output P12 / DECK2 cassette detect switch input.
65	P11/REB	O/I	FL segment output P11 / DECK2 side-B record OK switch input.
66	P10/CAM2	O/I	FL segment output P10 / DECK2 cam switch input.
67	P9/AUTO1	O/I	FL segment output P9 / DECK1 auto stop signal input.
68	P8/AUTO2	O/I	FL segment output P8 / DECK2 auto stop signal input.
69	P7/CAM1	O/I	FL segment output P7 / DECK1 cam switch input.
70	P6/CST1	O/I	FL segment output P6 / DECK1 cassette detect switch input.
71	P5/REA	O/I	FL segment output P5 / DECK2 side-A record OK switch input.
72	VDD4	–	Power supply input. Connected to VDD3.
73	P4/C-ATB	O/I	FL segment output P4 / CD auto adjust SW input.
74	P3/C-ATG	O/I	FL segment output P3 / CD auto adjust SW input.
75	P2/C-ABG	O/I	FL segment output P2 / CD auto adjust SW input.
76	P1/D-TG	O/I	FL segment output P1 / CD auto adjust SW input.
77	K-SCAN	O	Switch scan timing output.
78	MA-STB .	O	Main shift register data latch strobe output.
79	DATA	O	All serial IC data output.
80	CLK	O	All serial IC clock output.
81	PRO-CE	O	PRO-LOGIC data latch strobe output. (Not used)
82	PLL-CE	O	PLL IC (LC72131D) chip enable output.
83	TRAY-OPEN	O	CD tray open data output.
84	TRAY-CLOSE	O	CD tray close data output.
85	LED-STB	O	Front shift register data latch strobe output.
86	DISH-RVS	O	CD turntable reverse rotation output.
87	DISH-FWD	O	CD turntable forward rotation output.
88	GE-CE	O	E-GEQ IC (M62431FP) chip enable.
89	VSS2	–	GND terminal.
90	VDD2	–	Power supply input. Connected to VDD1.
91	LED-CD	O	Function LED CD control.
92	LED-VIDEO	O	Function LED video control.
93	SOL1	O	DECK1 solenoid output.
94	SOL2	O	DECK2 solenoid output.
95	O-MOTOR	O	DECK motor output.

<TUNER SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.15% (W.R.M.S)
Pinch roller pressure :	270 ~ 330g (FWD, REV)
Take-up torque :	30 ~ 55g-cm (FWD, REV)
F.F & REW torque :	75 ~ 180g-cm (FWD) 75 ~ 130g-cm (REW)
Back tension :	2 ~ 7g-cm (FWD, REV)
PB Output level :	2.8V ± 2dB (SP OUT 2V)
REC/PB Output level :	2.0V ± 2dB (SP OUT 2V)
Distortion (REC/PB) :	Less than 2.0% (NORMAL, CrO2)
Noise level (PB) :	Less than 18mV (NORMAL, SP OUT 2V) Less than 15mV (CrO2, SP OUT 2V)
Noise level (REC/PB) :	Less than 20mV (DOLBY OFF, NORMAL) Less than 18mV (DOLBY OFF, CrO2)
Crosstalk :	More than 50dB (1kHz, NORMAL)
Channel separation :	More than 35dB (1kHz, NORMAL)
Erasing ratio :	More than 60dB (at 125Hz, 10VU, CrO2)
REC bias frequency :	85kHz
Test tape :	NORMAL : TTA-602 CrO2 : TTA-615

IHF Sensitivity : (THD 3%)	Less than 10dB [at 87.5MHz] Less than 9dB [at 98.0 / 108.0MHz]
S/N 50dB Quieting sensitivity :	Less than 36dB [at 87.5 / 98.0 / 108.0MHz]
Signal to noise ratio :	(MONO) More than 72dB (STEREO) More than 66dB [at 98.0MHz]
Distortion :	Less than 1.2% [at 98.0MHz]
Auto stop level :	25dB $\pm$ 10dB [at 98.0MHz]
Stereo separation :	More than 25dB [at 98.0MHz]
Intermediate frequency :	10.7MHz

Sensitivity :	Less than 60dB
(S/N 20 dB)	[at 600kHz (LH)]
	[at 603kHz (HE)]
	Less than 58dB
	[at 1000 / 1400kHz (LH)]
	[at 999 / 1404kHz (HE)]
Signal to noise ratio :	More than 36dB
	[at 1000kHz (LH)]
	[at 999kHz (HE)]
Distortion :	Less than 1.5%
	[at 1000kHz (LH)]
	[at 999kHz (HE)]
Auto stop level :	Less than 60dB
	[at 1000kHz (LH)]
	[at 999kHz (HE)]
Intermediate frequency :	450kHz

8. Auto Stop Level Check

AM

Settings : • Test point : TP7 (STOP)
• Input level : Variable

Method : Check the auto stop at AM 1000kHz and the input level is 50dB $\pm$ 10dB.

FM

Settings : • Test point : TP7 (STOP)
• Input level : Variable

Method : Check the auto stop at FM 98.0MHz and the input level is 15dB ~ 30dB.

9. Tape Speed Adjustment (DECK2)

Settings : • Test tape : TTA-100
• Test point : TP6 (Lch), TP5 (Rch)
• Adjustment location : SFR1

Method : Play back the test tape and adjust SFR1 so that the test point becomes 3000Hz $\pm$ 5Hz(FWD) and FWD PLAY speed $\pm$ 45Hz(REV).

10. Head Azimuth Adjustment (DECK1, DECK2)

Settings : • Test tape : TTA-300
• Test point : TP6 (Lch), TP5 (Rch)
• Adjustment location : Head azimuth adjustment screw

Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

12. PB Frequency Response Check (DECK1, DECK2)

Settings : • Test tape : TTA-300
• Test point : TP6 (Lch), TP5 (Rch)

Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is $0\text{dB} \pm 3\text{dB}$.
Next, check that the Lch and Rch difference level of 10kHz signal is less than 2dB.

14. REC/PB Frequency Response Adjustment (DECK2)

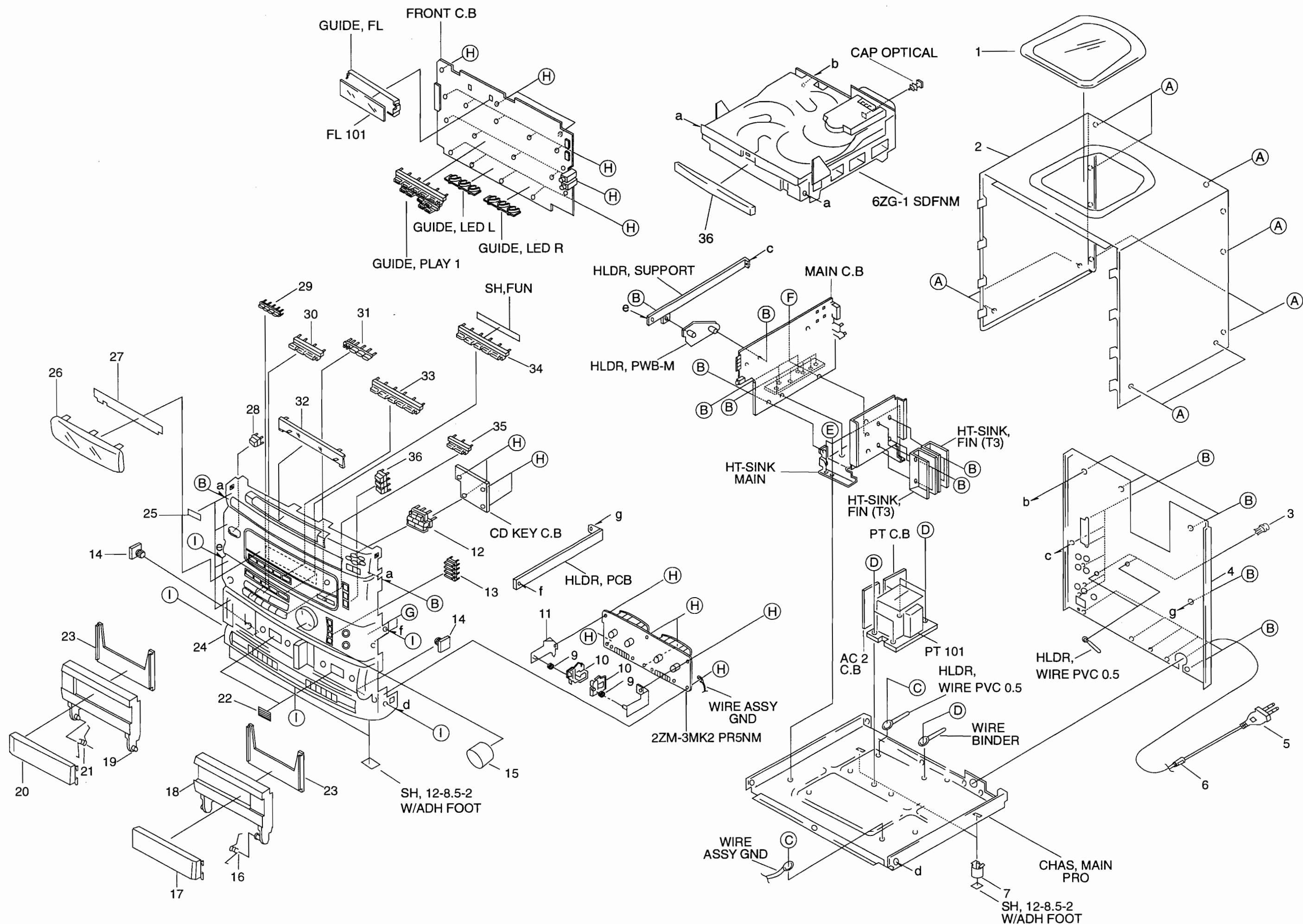
Settings :

- Test tape : TTA-602
- Test point : TP6 (Lch), TP5 (Rch)
- Input signal : 1kHz / 10kHz (LINE IN)
- Adjustment location : SFR351 (Lch)
SFR352 (Rch)

Method :

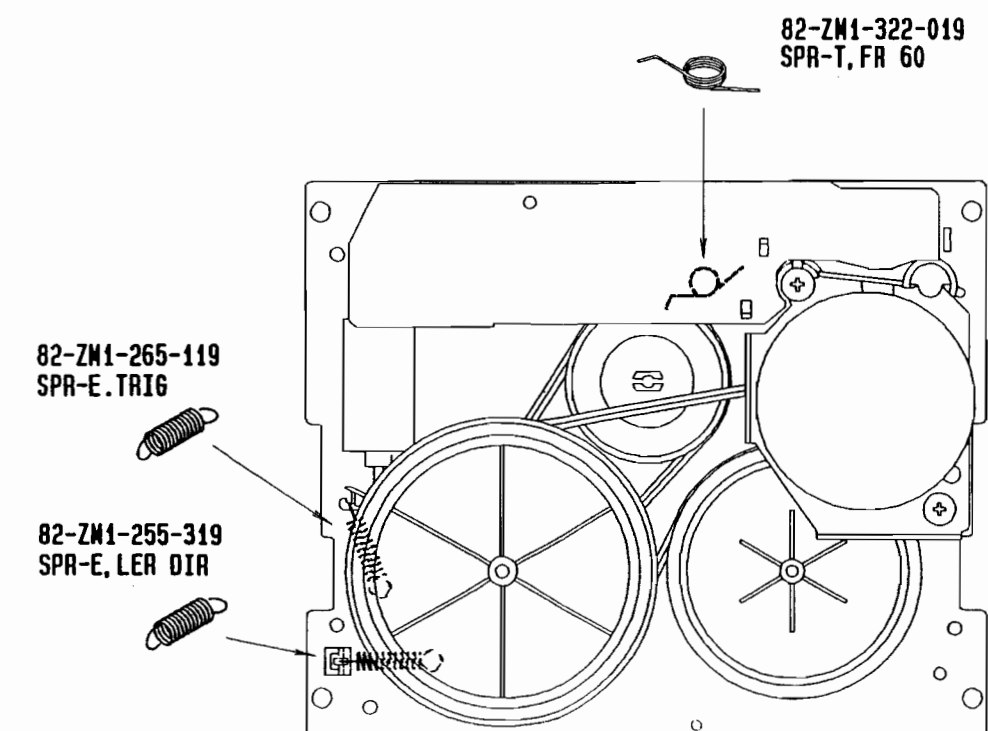
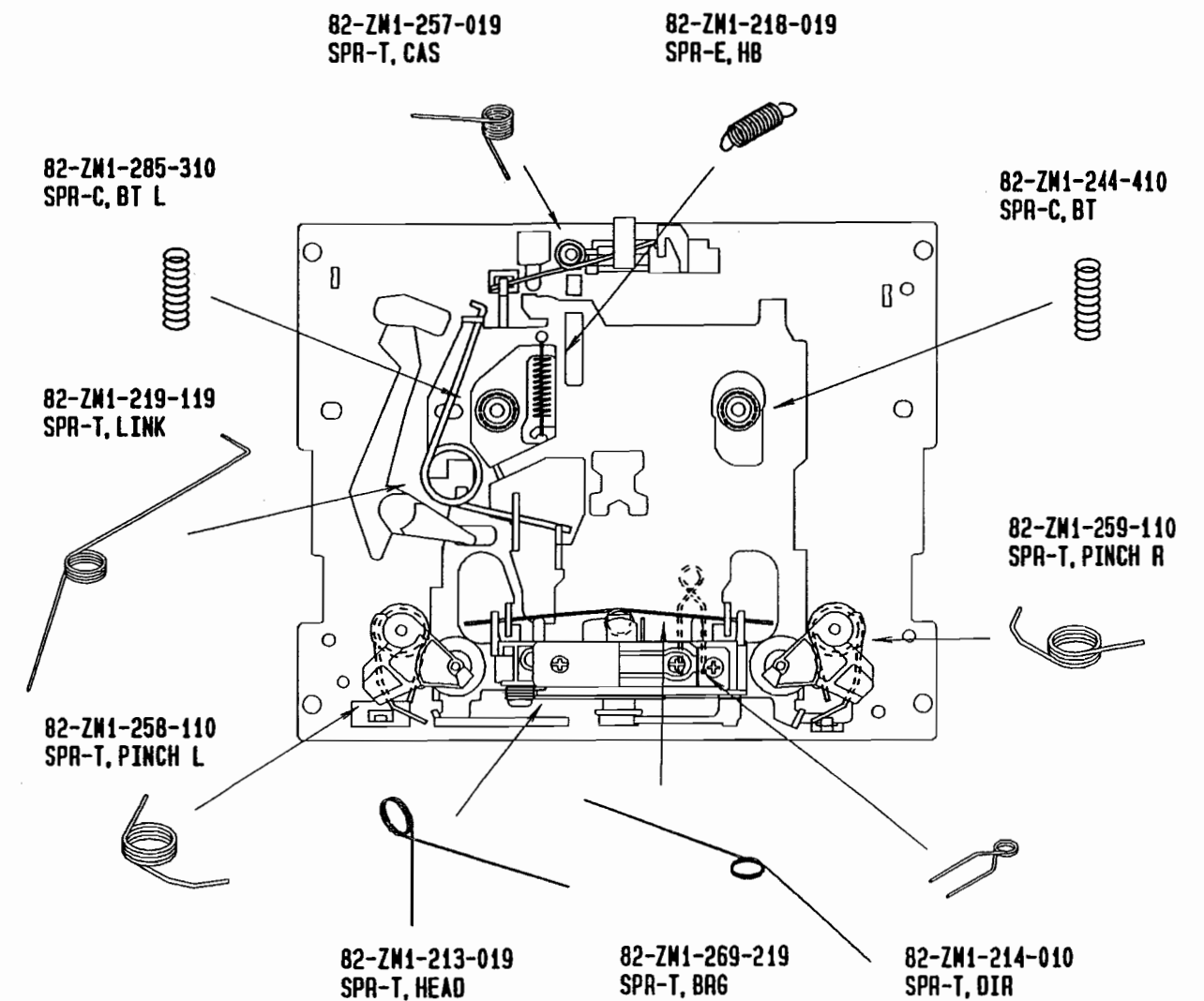
Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP5, TP6 becomes 12mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output level of the 10kHz signals becomes $0\text{dB} \pm 0.5\text{dB}$ with respect to that of the 1kHz signal.

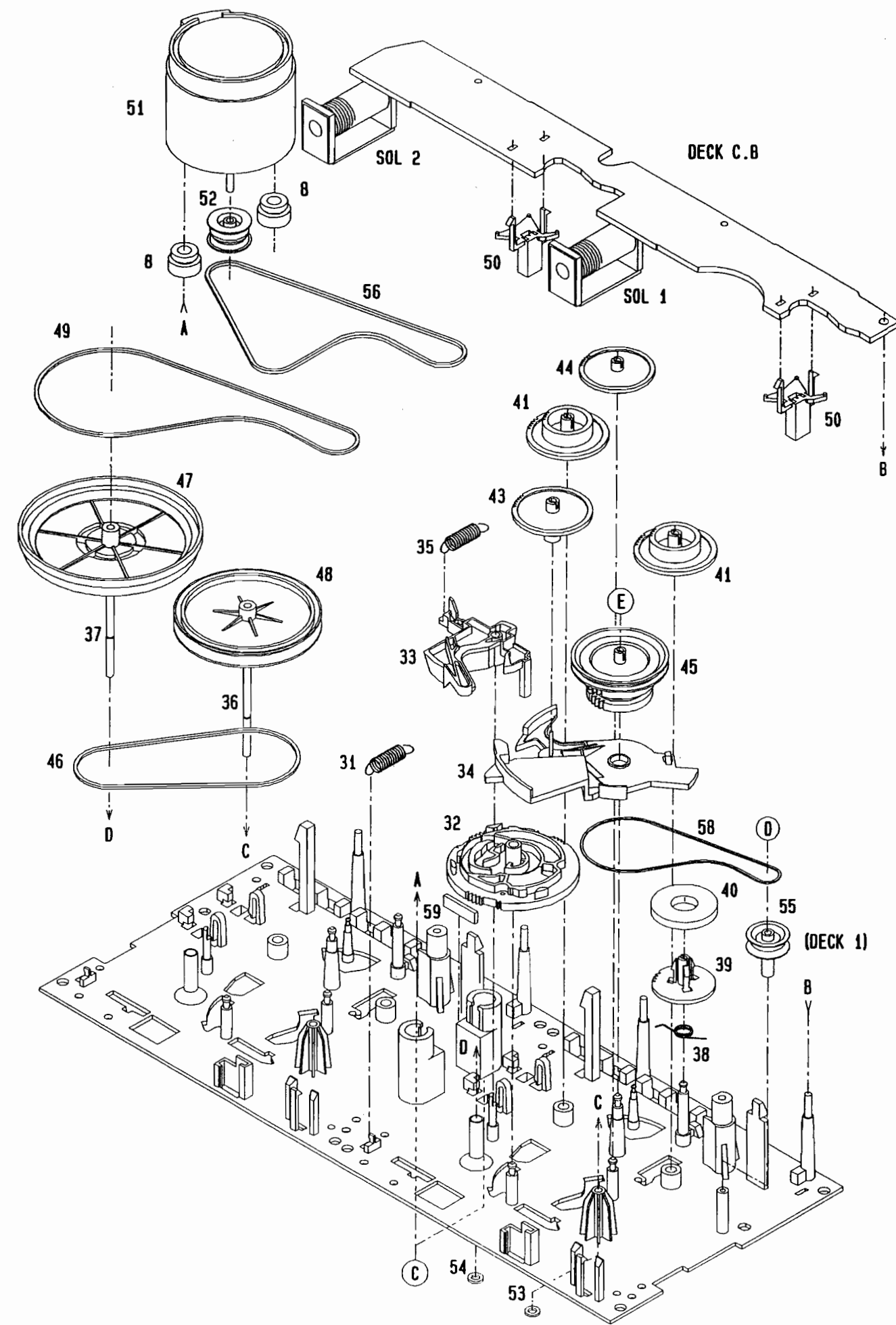
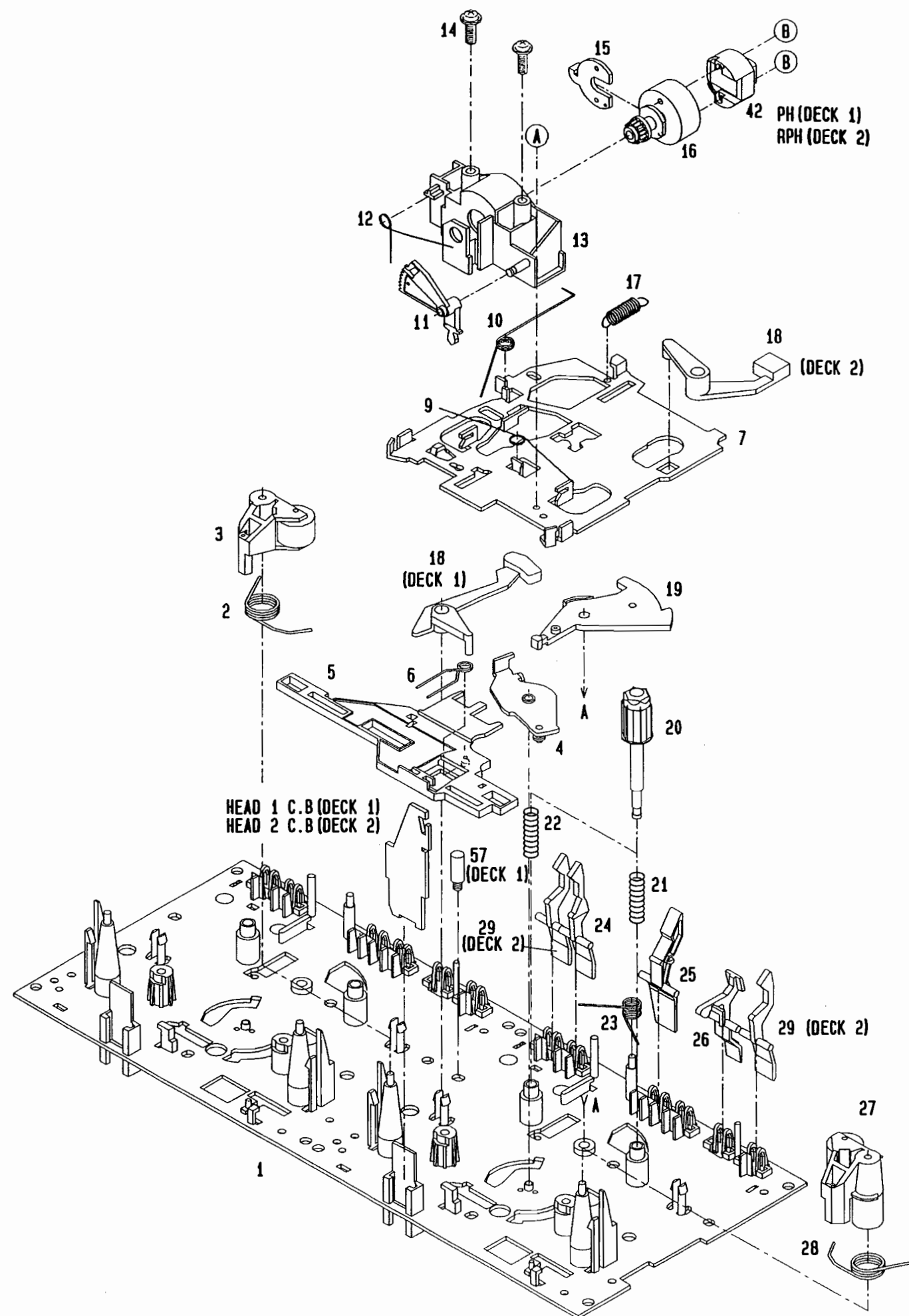
15. Bias OSC Frequency Adjustment (DECK2)
 Settings : • Test point : TP10 (BIAS)
 • Adjustment location : L351
 Method : Set DECK2 to the REC mode and adjust L351
 so that the frequency at the test point is
 85kHz $\pm$ 1kHz.



If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF.NO.	PART NO.	KANRI NO.	DESCRIPTION	REF.NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-MA3-042-010		WINDOW, TOP	24	87-MA5-002-010		CABI, FR LH<LH>
2	87-MA5-027-010		CABI, STEEL	25	82-NE8-032-010		BADGE, AIWA 27.5 ABS GLD
3	87-084-077-010		RIVET, NYL3.5-4.5	26	87-MA5-024-010		WINDOW, AMP
4	87-MA5-028-010		PANEL, REAR HEJSTNM<HE>	27	87-MA5-021-010		PLATE, GEQ
4	87-MA5-051-010		PANEL, REAR LHSTN<LH>	28	87-MA5-012-010		KEY, POWER
△ 5	87-050-079-010		AC CORD ASSY, E BLK	29	87-MA5-035-010		KEY, DUB
6	87-085-185-010		BUSHING, AC CORD(E)CM-22B	30	87-MA5-037-010		KEY, ASSY PLAY
7	87-MA3-062-010		FOOT, H17	31	87-MA5-043-010		KEY, ASSY PF
8	87-NF4-217-010		HLDR, LOCK 2	32	87-MA5-023-010		WINDOW, CD
9	82-NF5-228-010		SPR-C, LOCK	33	87-MA5-014-010		KEY, GEQ
10	82-NF5-229-010		PLATE, LOCK(*)	34	87-MA5-015-010		KEY, FUN
11	87-NF4-216-010		HLDR, LOCK 1	35	87-MA5-036-010		KEY, VF
12	87-MA5-011-010		KEY, DIRECT	36	87-MA5-013-010		KEY, DSP
13	87-MA5-033-010		KEY, BBE	37	87-MA5-009-010		PANEL, TRAY
14	87-063-165-010		OIL-DMPR, 150	A	87-067-641-010		UTT2+3-8 W/O SLOT BLK
15	87-MA3-027-010		KNOB, RTRY MAIN	B	87-067-703-010		BVT2+3-10 W/O SLOT
16	82-NF5-219-010		SPR-T, EJECT 2(SIN)	C	87-067-688-010		BVTT+3-6
17	87-MA5-026-010		WINDOW, CASS R	D	87-067-975-010		S-SCREW, IT+4-8 SWCH12A
18	87-MA5-006-010		BOX, CASS R	E	87-067-579-010		BVT2+3-8 W/O SLOT
19	87-MA5-005-010		BOX, CASS L	F	87-NF4-224-010		S-SCREW, IT3B+3-8CU
20	87-MA5-025-010		WINDOW, CASS L	G	81-MK1-210-010		S-SCREW, BFT2+3-16
21	82-NF5-218-010		SPR-T, EJECT 1(SIN)	H	87-078-060-010		BVIT3B+3-10
22	81-532-080-010		LBL, CASS-COMPT	I	87-591-095-410		QIT+3-8
23	86-NF6-061-010		REFLECTOR, CASS				
24	87-MA5-001-010		CABI, FR HE<HE>				



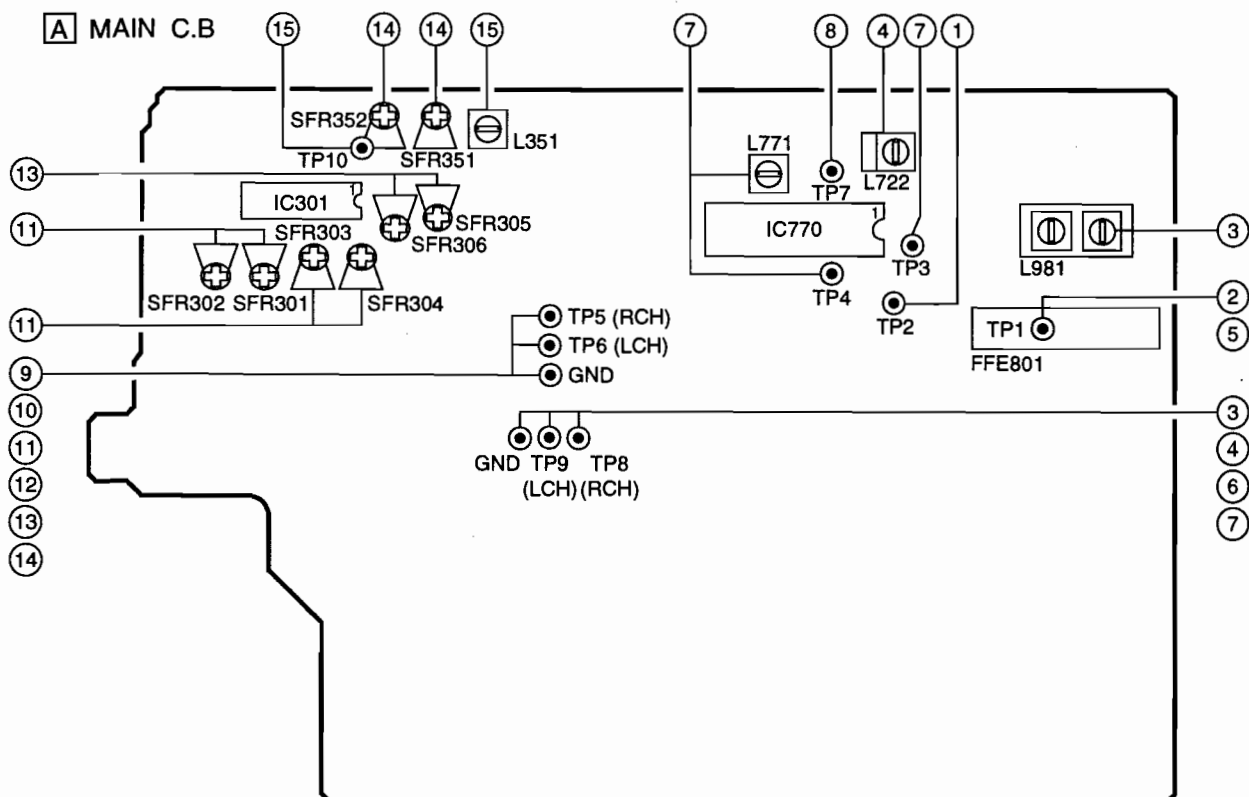


Pin No.	Pin Name	I/O	Description
96	I-IFC/I-SUBQ	I	Tuner function: IF count serial data input. CD function: CD IC data input.
97	I-STEREO/O-SQ CLK	I O	Tuner function: Tuner stereo detect input. CD function: CD IC control data bus clock output.
98	I-RDS-DATA/O-DATA	I O	Tuner function: RDS data input. (Not used) CD function: CD IC control data bus data output.
99	O-CD/XTL	O	CD IC control latch strobe output.
100	O-CDCLK	O	CD IC control clock output.

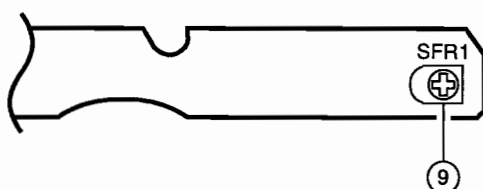
IC, LC72131D

Pin No.	Pin Name	I/O	Description																								
1	X IN	I	A crystal oscillator (7.2MHz) is connected between these pins.																								
22	X OUT	O																									
2	NC	–	Not used.																								
3	CE	I	To enable the IC. Active "H".																								
4	DI	I	Digital data input from CPU (LC866560W-5E82) when relevant key is operated. Active "H".																								
5	CL	I	To clock in the data DI.																								
6	DO	O	Digital data output to CPU (LC866560W-5E82).																								
7	T-BASE	O	Outputs a reference clock signal (8Hz) for the clock.																								
8	MONO / BEAT	O	Outputs "H" when MONO / BEAT is switched.																								
9	$\overline{\text{FM}} / \overline{\text{SW}}$	O	Output "L" or "H" as follows: <table><tr><td colspan="2">2 BAND</td><td colspan="3">3 BAND</td><td colspan="3">3 BAND</td></tr><tr><td>AM</td><td>FM</td><td>LW</td><td>MW</td><td>FM</td><td>MW</td><td>SW</td><td>FM</td></tr><tr><td>H</td><td>L</td><td>H</td><td>H</td><td>L</td><td>H</td><td>L</td><td>L</td></tr></table>	2 BAND		3 BAND			3 BAND			AM	FM	LW	MW	FM	MW	SW	FM	H	L	H	H	L	H	L	L
2 BAND		3 BAND			3 BAND																						
AM	FM	LW	MW	FM	MW	SW	FM																				
H	L	H	H	L	H	L	L																				
10	$\overline{\text{MW}} / \text{SW}$	O	Outputs "L" or "H" as follows: <table><tr><td colspan="2">2 BAND</td><td colspan="3">3 BAND</td><td colspan="3">3 BAND</td></tr><tr><td>AM</td><td>FM</td><td>LW</td><td>MW</td><td>FM</td><td>MW</td><td>SW</td><td>FM</td></tr><tr><td>L</td><td>L</td><td>H</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr></table>	2 BAND		3 BAND			3 BAND			AM	FM	LW	MW	FM	MW	SW	FM	L	L	H	L	L	L	H	L
2 BAND		3 BAND			3 BAND																						
AM	FM	LW	MW	FM	MW	SW	FM																				
L	L	H	L	L	L	H	L																				
11	IF-MUTE	O	To control internal counter.																								
12	IF-IN	I	General purpose counter input.																								
13	$\overline{\text{TUNE}}$	I	Receives "L" when station is tuned.																								
14	NC	–	Not used.																								
15	AM-IN	I	Receives the AM local oscillator frequency signal.																								
16	FM-IN	I	Receives the FM local oscillator frequency signal.																								
17	VDD	–	Supply power to IC (+5V).																								
18	PD	O	PLL charge pump output.																								
19	A-IN	I	The MOS transistor for PLL active low pass filter.																								
20	A-OUT	O																									
21	VSS	–	Ground.																								

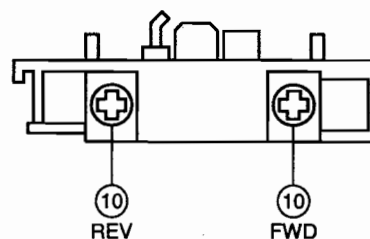
ADJUSTMENT



E DECK C.B



DECK-1 P HEAD, DECK-2 R/P/E HEAD



< TUNER SECTION >

1. Clock Frequency Check
 Settings : • Test point : TP2 (CLK)
 Method : Set to AM 1710kHz<LH>, 1602kHz<HE> and check that the test point is 2160kHz $\pm$ 45Hz<LH>, 2052kHz $\pm$ 45Hz<HE>.
2. AM VT Check
 Settings : • Test point : TP1 (VT)
 Method : Set to AM 1710kHz<LH>, 1602kHz<HE> and check that the test point is less than 7.0V<LH>, less than 6.8V<HE>. Then set to AM 530kHz<LH>, 531kHz<HE> and check that the test point is more than 0.6V.
3. AM Tracking Adjustment
 Settings : • Test point : TP9 (Lch), TP8 (Rch)
 • Adjustment location : L981
 Method : Set to AM 1000kHz and adjust L981 so that the test point becomes maximum.
4. AM IF Adjustment
 Settings : • Test point : TP9 (Lch), TP8 (Rch)
 • Adjustment location : L772 450kHz
5. FM VT Check
 Settings : • Test point : TP1 (VT)
 Method : Set to FM 87.5MHz (108.0MHz) and check that the test point is more than 1.0V (less than 8.0V).
6. FM Tracking Check
 Settings : • Test point : TP9 (Lch), TP8 (Rch)
 Method : Set to FM 98.0MHz and check that the test point is 0dB $\pm$ 6dB<LH>, 3dB $\pm$ 6dB<HE> at distortion less than 3%.

TAPE MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM3-301-519		CHAS ASSY, M2	36	82-ZM1-236-019		CAPSTAN N 2-41.5
2	82-ZM1-258-110		SPR-T, PINCH L	37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
3	82-ZM1-341-110		LVR ASSY, PINCH L2	38	82-ZM1-322-019		SPR-T, FR60
4	82-ZM1-333-010		PLATE, LINK 2	39	82-ZM1-220-219		GEAR, IDLER
5	82-ZM1-266-11K		LVR, DIR	40	82-ZM3-616-019		RING MAGNET 4
6	82-ZM1-214-010		SPR-T, DIR	41	82-ZM1-216-31K		GEAR, REEL
7	82-ZM1-206-81K		CHAS, HEAD	42	87-A90-366-010		HEAD, PH YK50P-BF414 FPC
8	82-ZM3-307-019		CUSH-G, DIA3.7-8-3.2	42	87-A90-367-010		HEAD, RPH YK56R-BF414 FPC
9	82-ZM1-269-219		SPR-T, BRG	43	82-ZM1-225-21K		GEAR, FR
10	82-ZM1-219-119		SPR-T, LINK	44	82-ZM1-226-019		GEAR, REW
11	82-ZM1-210-119		GEAR, H T	45	82-ZM3-333-310		SLIP DISK ASSY 2
12	82-ZM1-213-019		SPR-T, HEAD	46	82-ZM1-338-010		BELT FR4
13	82-ZM1-207-619		GUIDE, TAPE	47	82-ZM1-349-110		FLY-WHL, R W(DECK 2)
14	86-ZM4-206-010		S-SCREW, AZIMUTH	47	82-ZM3-338-110		FLY-WHL, R3 W(DECK 1)
15	82-ZM1-314-119		PLATE, HEAD	48	82-ZM1-348-010		FLY-WHL, L W(DECK 2)
16	82-ZM1-208-119		HLDR, HEAD	48	82-ZM1-348-010		FLY-WHL, L W(DECK 1)
17	82-ZM1-218-019		SPR-E, HB	49	82-ZM3-329-210		BELT, SBU R2
18	82-ZM1-263-110		LVR, EJECT L (DECK 1)	50	82-ZM1-245-210		HLDR, IC
18	82-ZM1-264-010		LVR, EJECT R (DECK 2)	51	87-045-347-019		MOT, SHU2L 70(M1)
19	82-ZM1-222-21K		LVR, PLAY	52	82-ZM3-221-010		PULLEY, MOT 2M
20	82-ZM1-217-319		REEL TABLE	53	82-ZM1-288-019		SH, 1.63-3.2-0.5 SLT
21	82-ZM1-244-510		SPR-C, BT	54	80-ZM6-243-019		SH, 1.75-3.6-0.5 SLT
22	82-ZM1-285-310		SPR-C, BT L	55	82-ZM3-335-210		PULLEY, COUPLER M3 (DECK 1)
23	82-ZM1-257-019		SPR-T, CAS	56	82-ZM3-337-010		BELT, SBU MOT 2
24	82-ZM1-241-319		LVR, MC	57	82-ZM3-339-010		SHAFT, COUPLER N3 (DECK 1)
25	82-ZM1-242-019		LVR, CAS	58	86-ZM1-206-010		BELT, MAIN L
26	82-ZM1-243-019		LVR, STOP	59	82-ZM3-340-010		SH, BELT D2
27	82-ZM1-344-110		LVR ASSY, PINCH R2	A	85-ZM3-202-010		S-SCREW, TG
28	82-ZM1-259-110		SPR-T, PINCH R	B	80-ZM6-207-019		V+1.6-7
29	82-ZM1-240-11K		LVR, REC (DECK 2)	C	82-ZM3-318-019		S-SCRW MOTOR M2
31	82-ZM1-255-319		SPR-E, LVR DIR	D	87-B10-043-010		W-P, 0.99-4-0.25 SLT
32	82-ZM3-305-01K		GEAR, CAM M2	E	82-ZM3-334-010		PW, 2.16-6-0.4
33	82-ZM1-227-21K		LVR, TRIG				
34	82-ZM3-306-11K		LVR, FR M2				
35	82-ZM1-265-119		SPR-E, TRIG				

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSOR
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G- -	
G- -	
G- -	

アイワ株式会社
AIWA CO.,LTD.

9420025, 750038

Tokyo Japan

REFERENCE NAME LIST

ELECTRICAL SECTION

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C-DIODE	DIODE, CHIP
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C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
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CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
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FILT	FILTER
FLTR	FILTER
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MOT	MOTOR
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VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

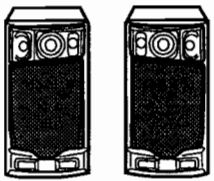
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DESCRIPTION	REFERENCE NAME
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CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

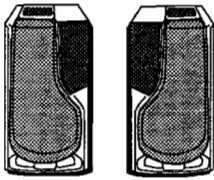
aiwa



SX-FZR700
SX-AZR800



SX-FZR700



SX-AZR800

SPEAKER

• TYPE: English

サービス技術ニュース	
番号	連絡内容
G- -	
G- -	
G- -	

アイワ株式会社
AIWA CO.,LTD.

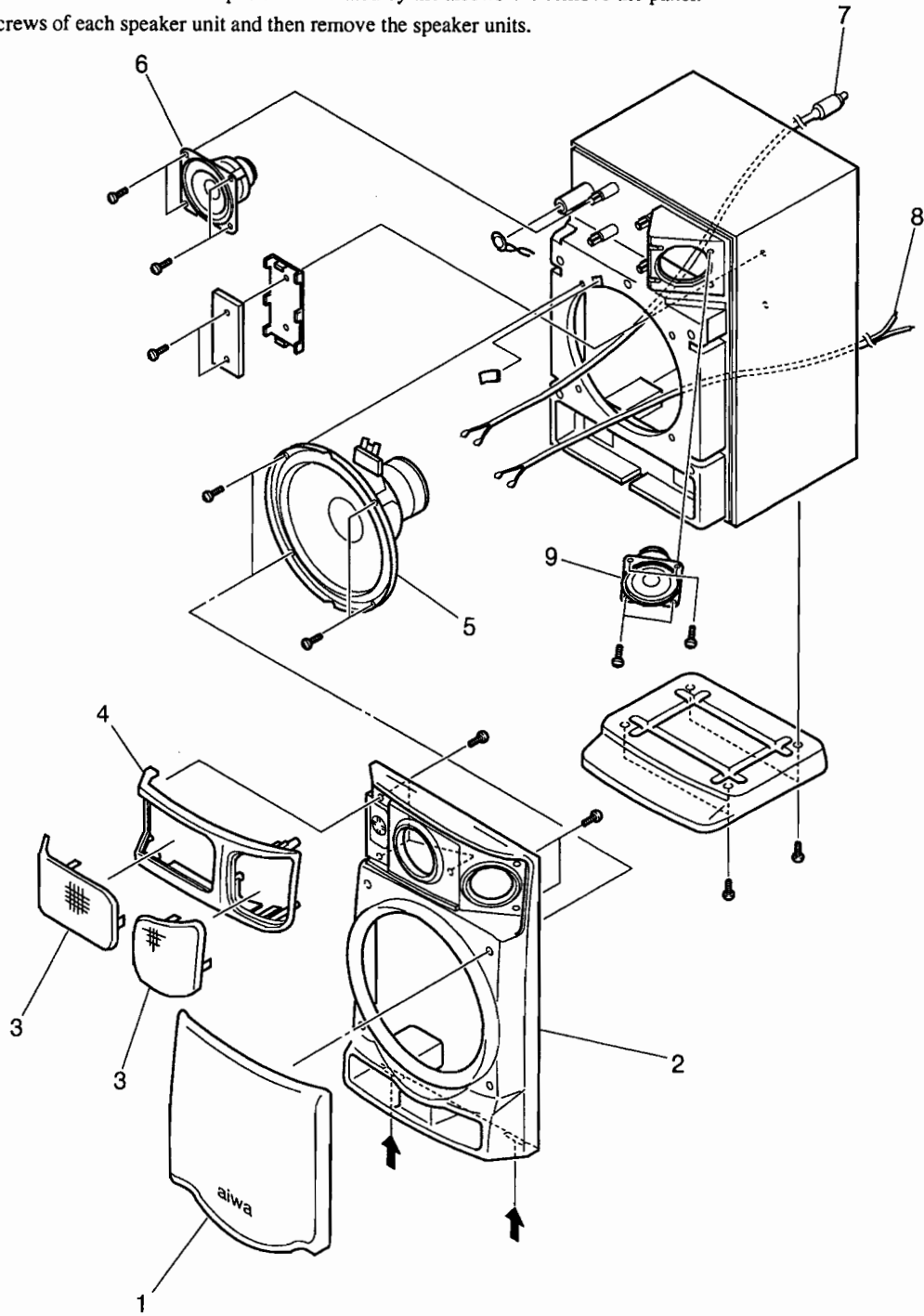
Printed by: Schaltungsdienst Lange Berlin (Germany)

9420025, 912162

Tokyo Japan

SX-FZR700 <YBNL, YJBNL, YJ7BNL, YLBNL>
SPEAKER EXPLODED VIEW 1 / 1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel.
Remove the screws of each speaker unit and then remove the speaker units.



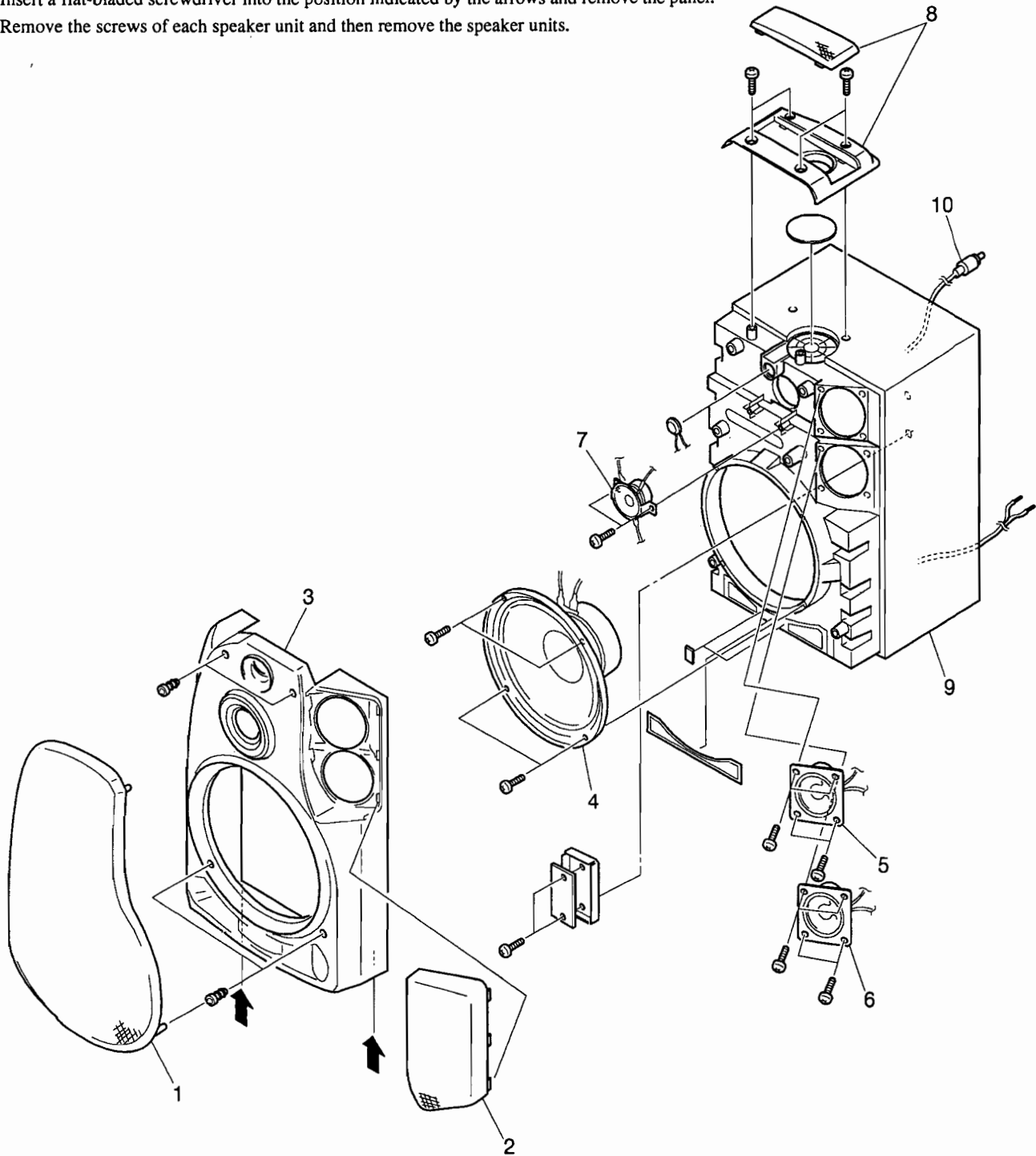
SPEAKER PARTS LIST 1 / 1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-MS5-017-010		GRILLE, FRAME ASSY R	7	87-MS4-611-010		SPKR, CORD Y/B
1	87-MS5-018-010		GRILLE, FRAME ASSY L	8	87-MS4-614-010		SPKR, CORD
2	87-MS5-001-010		PANEL, FR R	9	87-MS4-605-010		SPKR, SU 80
2	87-MS5-002-010		PANEL, FR L				
3	87-MS5-015-010		PROTECTOR, R				
3	87-MS5-016-010		PROTECTOR, L				
4	87-MS5-007-010		PANEL, TW R				
4	87-MS5-008-010		PANEL, TW L				
5	87-MS5-601-010		SPKR, W 200				
6	87-MS5-603-010		SPKR, MID 80				

SX-AZR800 <YBNL, YJBNL, YJ7BNL, YLBNL>
SPEAKER EXPLODED VIEW 1 / 1

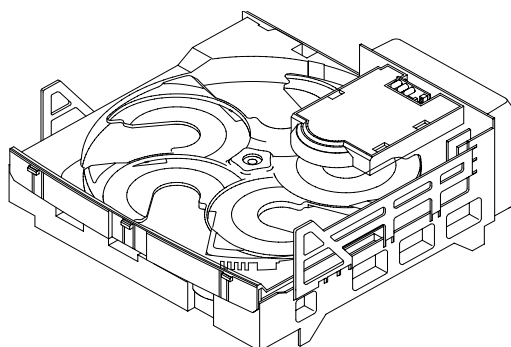
Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel.
Remove the screws of each speaker unit and then remove the speaker units.



SPEAKER PARTS LIST 1 / 1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-MS4-022-010		GRILLE, FRAME ASSY R	8	87-MS4-013-010		PROTECTOR, TOP
1	87-MS4-023-010		GRILLE, FRAME ASSY L	9	87-MS4-007-010		CABI, TOP R
2	87-MS4-011-010		PROTECTOR, R	9	87-MS4-008-010		CABI, TOP L
2	87-MS4-012-010		PROTECTOR, L	10	87-MS4-611-010		SPKR, CORD Y/B
3	87-MS4-001-010		PANEL, FR R				
3	87-MS4-002-010		PANEL, FR L				
4	86-MS3-601-010		SPKR, W 200				
5	87-MS4-603-010		SPKR, MID 80				
6	87-MS4-605-010		SPKR, SU 80				
7	87-MS4-605-010		SPKR, T 50				



SERVICE MANUAL

CD MECHANISM

BASIC CD MECHANISM : 3ZG-2 E1

TYPE
YSDFNSHCM
VOS1NDSM
YVOS1NDM
YSDNSHM
SDFNSHM

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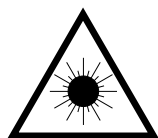
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DISASSEMBLY INSTRUCTIONS	4-6
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SCHEMATIC DIAGRAM-1 (YSDFNSHCM, YSDNSHM, SDFNSHM)	17, 18
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PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylitävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

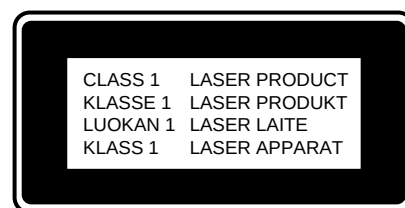
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

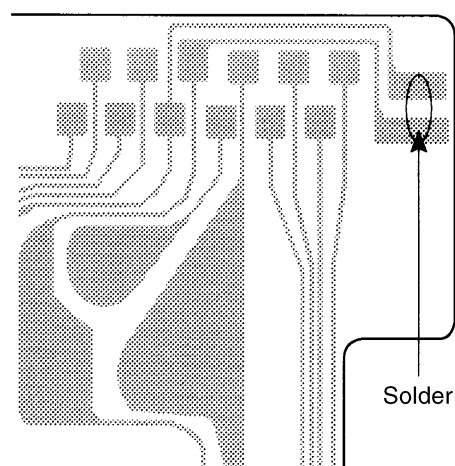


Precaution to replace Optical block (KSS-213B)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



DISASSEMBLY INSTRUCTIONS

1. How to replace PICK UP.

- 1) Open the TRAY.
Push the stopper to arrow direction and release half of the SHAFT SLED.
- 2) Turn GEAR MAIN CAM to the counterclockwise (arrow "a") direction, and lift up CD mechanism. (Fig-1)
- 3) Remove SHAFT SLED.
- 4) CD mechanism in down position, replace PICK UP.
- 5) Lift up CD mechanism (Fig-1), and Reassemble the SHAFT SLED.

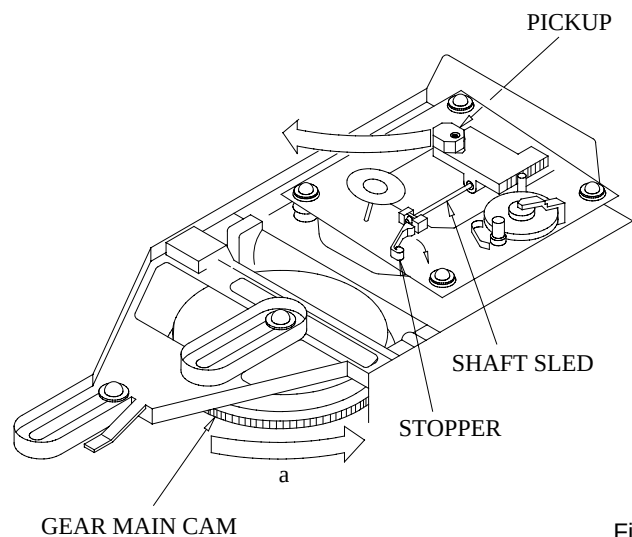


Fig-1

2. How to remove the 5CD CHANGER BLOCK (Fig-2)

- 1) Remove the two FFC of the CD circuit board, and remove the five SCREWS.
- 2) Lift 5 CD CHANGER BLOCK from behind, and remove it. (5CD CHANGER BLOCK can be removed even if PANEL TRAY is not removed.)

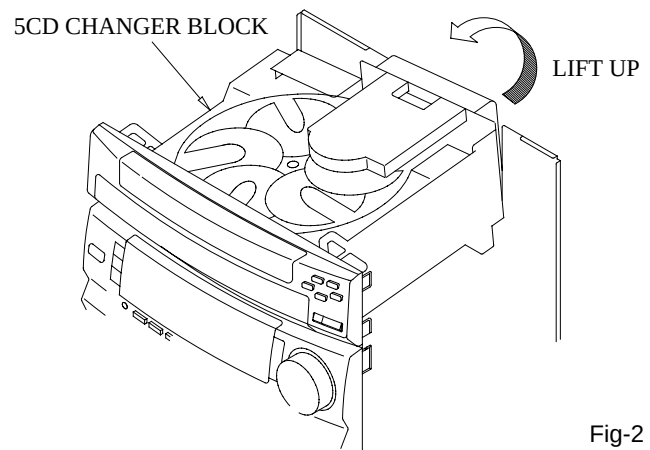
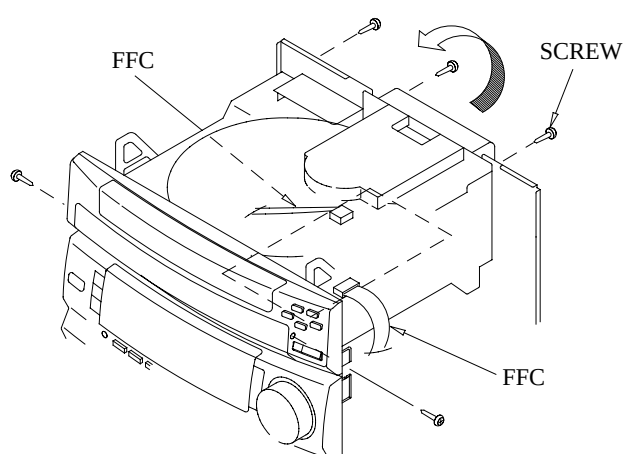
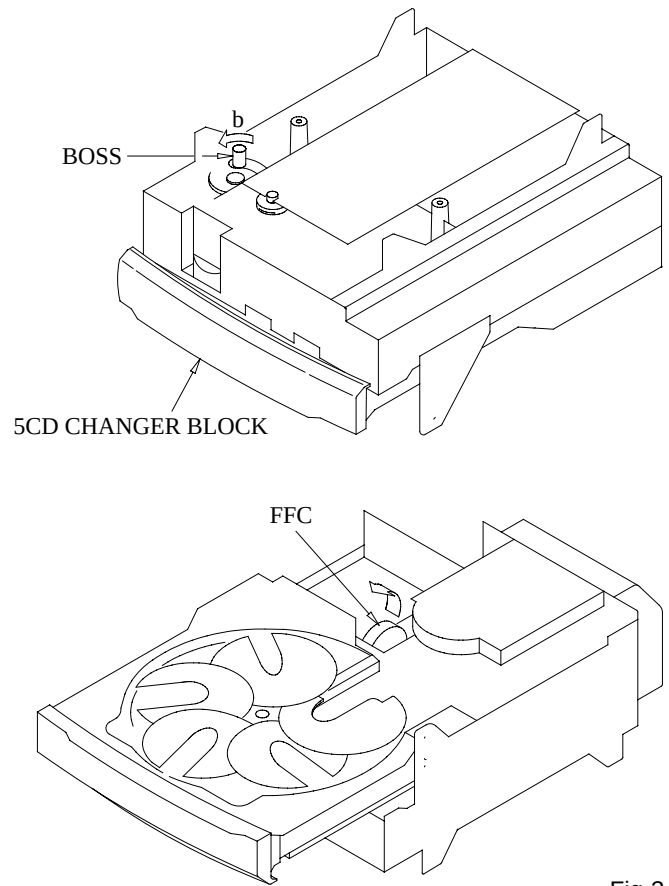
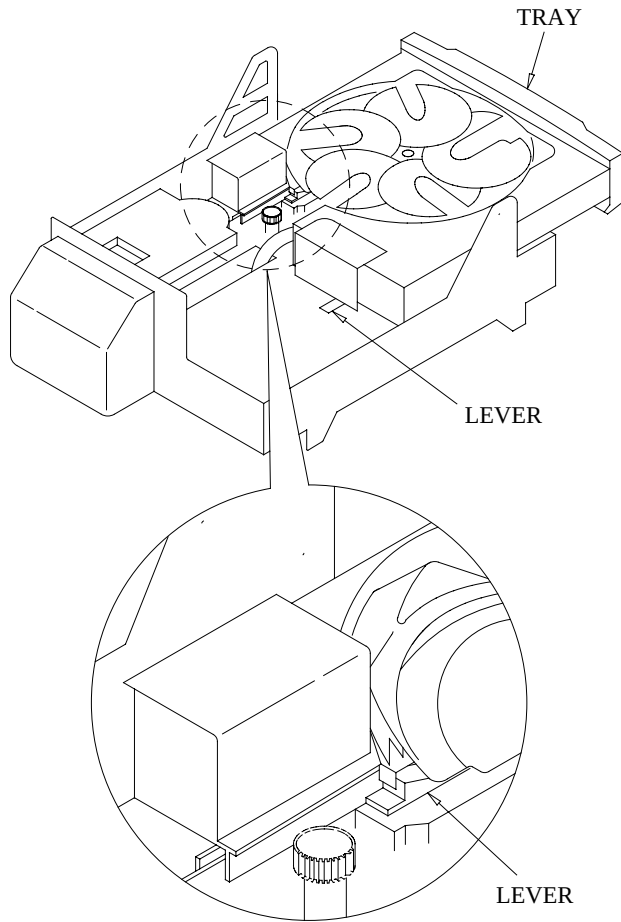


Fig-2

3. The disassemble and reassemble the TRAY

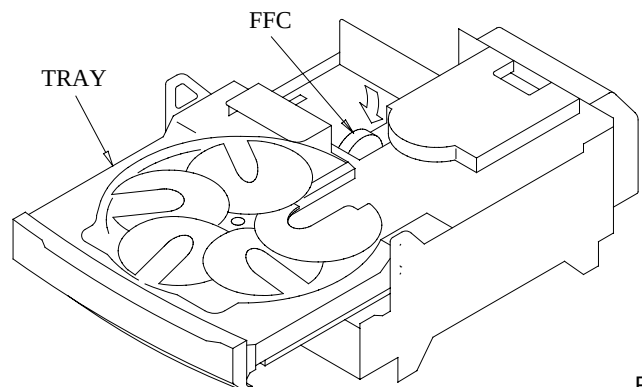
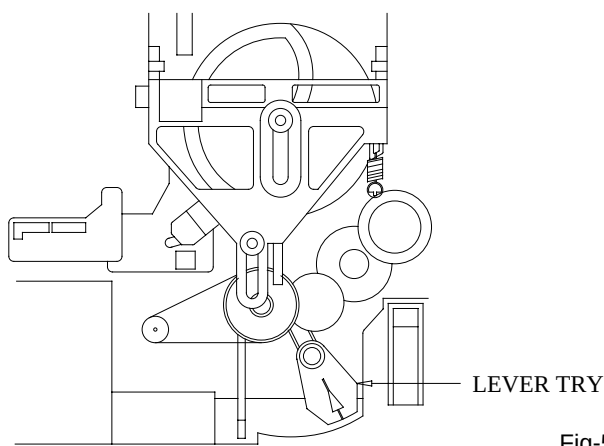
3-1. Disassembling procedure.

- 1) Push the PLATE GEAR'S Boss at the bottom part of CHAS MECHA strongly to the outside (arrow "b" direction). (Fig-3)
(Confirm that TRAY appears a little in the front.)
- 2) Draw TRAY to the open position.
- 3) Remove FFC, and push the two LEVERS at both side of the CHAS MECH to remove TRAY. (Fig-4)



3-2. Reassembling procedure.

- 1) Confirm that LEVER TRAY is at the most right position and check for the CD Mechanism to be in the down position. (Fig-5)
- 2) Push in the TRAY along the rail of the CHAS MECHA.
- 3) After TRAY is half closed and FFC is put in, it can enter by force until the end of TRAY closed. (Fig-6)



4. How to reassemble the TURN TABLE. (Fig-7)

- 1) Push LEVER TT in the direction of "C", and put in the TURN TABLE 5CD. (Fig-7)
After reassembly, one of the TURN TABLE DISC TRAY (can be either one of the five disc trays) must be aligned with TURN TABLE 5CD. (Fig-8)
That is, having no gap difference between the TURN TABLE 5CD and the TRAY 5CD.

* When reassembling the TURN TABLE 5CD, it is acceptable facing any CD number (1-5).

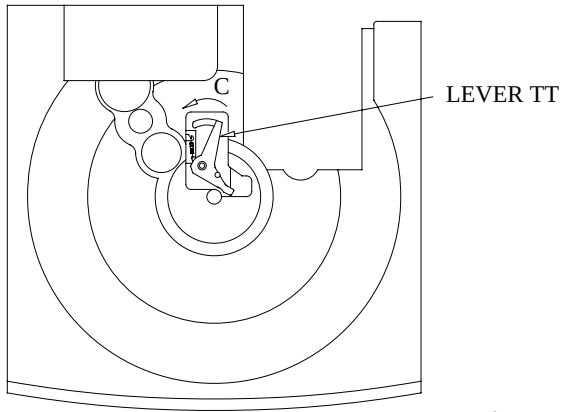


Fig-7

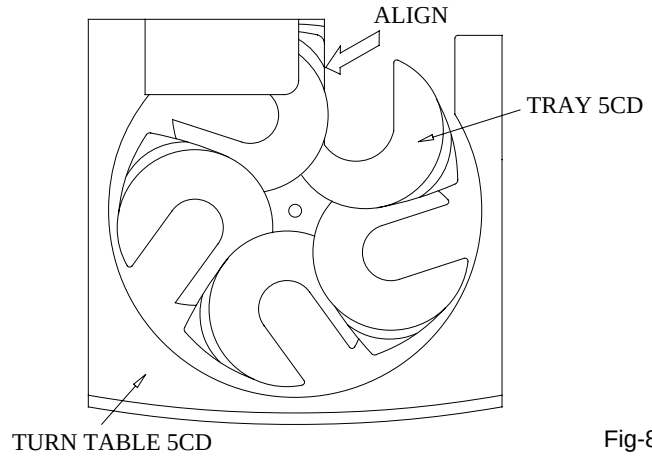


Fig-8

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

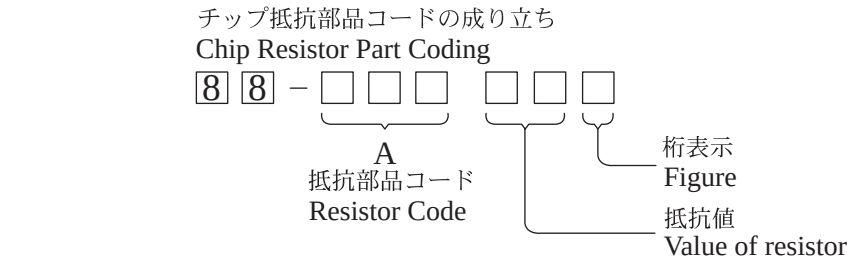
REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C101	87-010-263-040		CAP, E 100-10
	87-A20-547-010		C- IC, CXA1992AR<EXCEPT YSDFNSHCM>	C102	87-010-178-080		CHIP CAP 1000P
	87-A20-919-040		C- IC, BA5915FP<YVOS1NDM, VOS1NDSM>	C103	87-010-550-040		CAP, E 100-6.3 GAS
	87-A20-917-010		C- IC, CXD2540Q-1/2	C104	87-010-182-080		C-CAP, S 2200P-50 B
			<YVOS1NDM, VOS1NDSM>	C105	87-010-198-080		CAP, CHIP 0.022
	87-A20-546-010		C- IC, CXD2589Q<SDFNSHM, YSDNSHM>	C106	87-016-081-080		C-CAP, S 0.1-16 RK
	87-A20-592-040		C- IC, M51943 AML<EXCEPT YSDFNSHCM>	C107	87-016-081-080		C-CAP, S 0.1-16 RK
				C108	87-016-081-080		C-CAP, S 0.1-16 RK
	87-A20-602-040		C- IC, M5291FP<YVOS1NDM, VOS1NDSM>	C109	87-010-497-040		CAP, E 4.7-35 GAS
	87-A20-925-040		C- IC, BA05FP<YVOS1NDM, VOS1NDSM>	C110	87-016-081-080		C-CAP, S 0.1-16 RK
	87-A20-905-040		C- IC, BA033FP<YVOS1NDM, VOS1NDSM>				
	87-070-305-010		IC, BA6897S<SDFNSHM, YSDNSHM>	C111	87-010-197-080		CAP, CHIP 0.01 DM
	87-001-982-010		IC, TA7291S<EXCEPT YSDFNSHCM>	C112	87-010-402-040		CAP, E 2.2-50
				C113	87-010-382-040		CAP, E 22-25 SME
	87-A20-918-040		C- IC, SM5878AM<YVOS1NDM, VOS1NDSM>	C114	87-010-213-080		C-CAP, S 0.015-50 B
	87-A20-653-010		C- IC, RL5C293<YVOS1NDM, VOS1NDSM>	C115	87-010-263-040		CAP, E 100-10
	87-017-825-010		IC, GP1F32T<YVOS1NDM, VOS1NDSM>				
	86-ZG1-658-010		C- IC, CXP84548-112Q	C116	87-010-197-080		CAP, CHIP 0.01 DM
			<YVOS1NDM, VOS1NDSM>	C117	87-010-369-080		C-CAP, S 0.033-25 K B
	87-A20-895-010		C- IC, CXD1856R<YVOS1NDM, VOS1NDSM>	C118	87-010-197-080		CAP, CHIP 0.01 DM
				C119	87-010-369-080		C-CAP, S 0.033-25 K B
	87-A20-921-040		C- IC, SN74LVU04APW	C120	87-010-197-080		CAP, CHIP 0.01 DM
			<YVOS1NDM, VOS1NDSM>				
	87-A20-249-040		C- IC, BU2874FV<YVOS1NDM, VOS1NDSM>	C121	87-010-494-040		CAP, E 1-50 GAS
	87-A20-962-040		C- IC, MSM54V16258B/BSL	C122	87-010-154-080		CAP CHIP 10P
			<YVOS1NDM, VOS1NDSM>	C123	87-010-154-080		CAP CHIP 10P
	87-A20-957-040		C- IC, SN74LV245APW	C124	87-010-154-080		CAP CHIP 10P
			<YVOS1NDM, VOS1NDSM>	C125	87-010-596-080		CAP, S 0.047-16
	86-ZG1-655-040		C- IC, MSM531031B-72GS-KR1				
			<YVOS1NDM, VOS1NDSM>	C126	87-010-596-080		CAP, S 0.047-16
	87-A21-099-040		C- IC, HD74HC393FP	C127	87-012-140-080		CAP 470P
			<YVOS1NDM, VOS1NDSM>	C128	87-010-596-080		CAP, S 0.047-16
				C129	87-010-198-080		CAP, CHIP 0.022
				C130	87-016-081-080		C-CAP, S 0.1-16 RK
TRANSISTOR				C131	87-010-550-040		CAP, E 100-6.3 GAS
	89-406-555-080		TR, 2SD655 (0.5W)<SDFNSHM, YSDNSHM>	C132	87-010-550-040		CAP, E 100-6.3 GAS
	89-111-625-080		TR, 2SA1162 (0.15W)	C133	87-012-158-080		C-CAP, S 390P-50 CH
			<YVOS1NDM, VOS1NDSM>	C150	87-010-145-080		CAP, S 1P-50 CH
	87-026-463-080		TR, 2SA933S (0.3W)	C202	87-010-596-080		CAP, S 0.047-16
			<SDFNSHM, YSDNSHM>				
	87-026-237-080		CHIP-TR, DTC124XK	C203	87-010-188-080		CAP, CHIP 6800P
			<YVOS1NDM, VOS1NDSM>	C204	87-012-156-080		C-CAP, S 220P-50 CH
	87-A30-117-010		TR, 2SA1357<YVOS1NDM, VOS1NDSM>	C205	87-018-134-080		CAPACITOR, TC-U 0.01-16
				C206	87-010-400-040		CAP, E 0.47-50
	87-026-231-080		CHIP-TRANSISTER, DTA124XK	C207	87-010-197-080		CAP, CHIP 0.01 DM
			<YVOS1NDM, VOS1NDSM>				
	89-421-722-380		TR, 2SD2172V/W<EXCEPT YSDFNSHCM>	C208	87-010-318-080		C-CAP, S 47P-50 CH
	89-320-011-080		TR, 2SC2001 (15W)	C209	87-012-154-080		C-CAP, S 150P-50 CH
			<EXCEPT YSDFNSHCM>	C210	87-012-154-080		C-CAP, S 150P-50 CH
	87-026-223-080		TR, DTC143TK<EXCEPT YSDFNSHCM>	C211	87-010-176-080		C-CAP, S 680P-50 SL
	89-110-155-080		TR, 2SA1015 (0.4W)<SDFNSHM, YSDNSHM>	C212	87-010-176-080		C-CAP, S 680P-50 SL
	87-026-580-080		C-TR, DTA123JK<EXCEPT YSDFNSHCM>	C213	87-010-401-040		CAP, E 1-50 SME
	89-327-125-080		CHIP TR, 2SC212GR	C213	87-010-382-040		CAP, E 22-25 SME
			<EXCEPT YSDFNSHCM>	C214	87-010-401-040		CAP, E 1-50 SME
	87-026-470-080		TR, HN1C03F (0.3W)	C214	87-010-382-040		CAP, E 22-25 SME
			<YVOS1NDM, VOS1NDSM>	C215	87-010-318-080		C-CAP, S 47P-50 CH
DIODE	87-026-210-080		CHIP-TR, DTC144EK	C216	87-010-318-080		C-CAP, S 47P-50 CH
			<YVOS1NDM, VOS1NDSM>	C217	87-010-380-040		CAP, E 47-16 SME
				C218	87-010-197-080		CAP, CHIP 0.01 DM
				C219	87-010-196-080		CHIP CAPACITOR, 0.1-25
				C220	87-010-370-040		CAP, E 330-6.3 SME
	87-020-027-080		CHIP-DIODE 1SS184				
			<YVOS1NDM, VOS1NDSM>	C221	87-010-197-080		CAP, CHIP 0.01 DM
	87-020-465-080		DIODE, 1SS133 (110MA)	C222	87-010-186-080		CAP, CHIP 4700P
			<SDFNSHM, YSDNSHM>	C223	87-016-081-080		C-CAP, S 0.1-16 RK
	87-A40-180-040		C-DIODE, SB07-015C	C228	87-018-209-080		CAP, CER 0.1-50V
5CD C.B<EXCEPT YVOS1NDM, V 1NDSM>			<YVOS1NDM, VOS1NDSM>	C230	87-010-197-080		CAP, CHIP 0.01 DM
	87-018-199-080		CAP, CER 3300P<SDFNSHM, YSDNSHM>				
				C231	87-018-209-080		CAP, CER 0.1-50V
	86-ZG1-605-010		CABLE, FFC 16P	C401	87-010-403-080		CAP, ELECT 3.3-50V
	86-ZG1-667-010		F-CABLE, 8P 1.25 175MM BLACK	C402	87-010-403-040		CAP, E 3.3-50 SME
	87-010-196-080		CHIP CAPACITOR, 0.1-25	C501	87-016-459-040		CAP, E 470-10 SMG
	87-010-260-080		CAP, ELECT 47-25V	C502	87-010-197-080		CAP, CHIP 0.01 DM
	87-010-197-080		CAP, CHIP 0.01 DM				
				C503	87-010-263-040		CAP, E 100-10
				C504	87-010-196-080		CHIP CAPACITOR, 0.1-25
				C505	87-010-196-080		CHIP CAPACITOR, 0.1-25
C1				C506	87-010-196-080		CHIP CAPACITOR, 0.1-25
C2				C507	87-010-196-080		CHIP CAPACITOR, 0.1-25
C4							

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C508	87-016-459-040		CAP, E 470-10 SMG	C121	87-010-596-080		CAP, S 0.047-16
C509	87-010-196-080		CHIP CAPACITOR, 0.1-25	C123	87-016-669-080		C-CAP, S 0.1-25 K B
C510	87-010-196-080		CHIP CAPACITOR, 0.1-25	C125	87-010-198-080		CAP, CHIP 0.022
C601	87-010-197-080		CAP, CHIP 0.01 DM	C126	87-016-669-080		C-CAP, S 0.1-25 K B
C602	87-016-251-040		CAP, E 220-16 SMG	C127	87-010-263-040		CAP, E 100-10
C603	87-010-196-080		CHIP CAPACITOR, 0.1-25	C130	87-010-263-040		CAP, E 100-10
C701	87-010-322-080		C-CAP, S 100P-50 CH	C131	87-010-263-040		CAP, E 100-10
C702	87-010-318-080		C-CAP, S 47P-50 CH	C132	87-010-178-080		CHIP CAP 1000P
C703	87-010-318-080		C-CAP, S 47P-50 CH	C133	87-010-263-040		CAP, E 100-10
C705	87-010-178-080		CHIP CAP 1000P	C134	87-010-196-080		CHIP CAPACITOR, 0.1-25
C901	87-010-260-040		CAP, E 47-25 SME	C135	87-010-196-080		CHIP CAPACITOR, 0.1-25
C902	87-010-196-080		CHIP CAPACITOR, 0.1-25	C136	87-010-196-080		CHIP CAPACITOR, 0.1-25
C991	87-010-196-080		CHIP CAPACITOR, 0.1-25	C137	87-010-196-080		CHIP CAPACITOR, 0.1-25
C992	87-010-196-080		CHIP CAPACITOR, 0.1-25	C138	87-010-182-080		C-CAP, S 2200P-50 B
C993	87-010-196-080		CHIP CAPACITOR, 0.1-25	C139	87-010-197-080		CAP, CHIP 0.01 DM
C994	87-010-196-080		CHIP CAPACITOR, 0.1-25	C140	87-010-384-040		CAP, E 100-25 SME
CN3	86-ZG1-609-010		CONN ASSY, 6P	C141	87-010-196-080		CHIP CAPACITOR, 0.1-25
CN7	86-ZG1-606-010		CONN ASSY 2P	C142	87-010-196-080		CHIP CAPACITOR, 0.1-25
CON1	87-A60-424-010		CONN, 16P V TOC-B	C143	87-010-197-080		CAP, CHIP 0.01 DM
CON2	87-009-034-010		CONN, 6P PH V	C144	87-010-196-080		CHIP CAPACITOR, 0.1-25
CON3	87-A60-133-010		CONN, 8P V FE	C145	87-010-196-080		CHIP CAPACITOR, 0.1-25
CON5	87-A60-154-010		CONN, 6P H FE	C149	87-010-213-080		C-CAP, S 0.015-50 B
CON6	87-A60-162-010		CONN, 14P H FE	C151	87-010-263-040		CAP, E 100-10
JR9	83-XM1-617-080		C-COIL, BK2125HM601	C152	87-010-197-080		CAP, CHIP 0.01 DM
JR28	83-XM1-617-080		C-COIL, BK2125HM601	C153	87-016-251-040		CAP, E 220-16 SMG
JW8	87-018-115-080		CAP, CER 47P-50V	C154	87-010-196-080		CHIP CAPACITOR, 0.1-25
JW42	87-003-223-010		FERRITE BEAD BL02RN2	C155	87-010-184-080		CHIP CAPACITOR 3300P(K)
JW47	87-003-223-010		FERRITE BEAD BL02RN2	C156	87-016-669-080		C-CAP, S 0.1-25 K B
JW48	87-026-689-080		PROTECTOR, 1A 60V 491	C157	87-010-992-080		C-CAP, S 0.047-25 B
JW72	87-003-223-010		FERRITE BEAD BL02RN2	C158	87-012-156-080		C-CAP, S 220P-50 CH
L101	87-003-102-080		COIL, 10UH	C159	87-016-526-080		C-CAP, S 0.47-16 BK
L201	87-003-102-080		COIL, 10UH	C160	87-010-197-080		CAP, CHIP 0.01 DM
LED901	87-A40-123-010		LED, SLZ-8128A-01-B	C161	87-010-182-080		C-CAP, S 2200P-50 B
M601	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)	C300	87-010-197-080		CAP, CHIP 0.01 DM
R101	87-022-363-080		C-RES, S 68K-1/10W F	C301	87-016-251-040		CAP, E 220-16 SMG
R102	87-022-363-080		C-RES, S 68K-1/10W F	C302	87-012-140-080		CAP 470P
R103	87-022-363-080		C-RES, S 68K-1/10W F	C303	87-010-178-080		CHIP CAP 1000P
R104	87-022-363-080		C-RES, S 68K-1/10W F	C304	87-010-384-040		CAP, E 100-25 SME
R105	87-022-365-080		C-RES, S 100K-1/10W F	C305	87-010-384-040		CAP, E 100-25 SME
R106	87-022-365-080		C-RES, S 100K-1/10W F	C306	87-016-251-040		CAP, E 220-16 SMG
R420	87-029-060-080		RES, FUSE 33-1/4 W	C307	87-010-196-080		CHIP CAPACITOR, 0.1-25
SW601	87-036-109-010		PUSH SWITCH	C308	87-010-263-040		CAP, E 100-10
SW602	87-036-109-010		PUSH SWITCH	C309	87-010-196-080		CHIP CAPACITOR, 0.1-25
SW603	87-036-109-010		PUSH SWITCH	C310	87-010-263-040		CAP, E 100-10
X201	87-A70-046-010		VIB, XTAL 16.934MHZ	C311	87-010-196-080		CHIP CAPACITOR, 0.1-25
VCD C.B<YVOS1NDM, VOS1NDMS				C312	87-010-178-080		CHIP CAP 1000P
	86-ZG1-605-010		CABLE, FFC 16P	C401	87-010-403-040		CAP, E 3.3-50 SME
	86-ZG1-667-010		F-CABLE, 8P 1.25 175MM BLACK	C402	87-010-403-040		CAP, E 3.3-50 SME
C101	87-010-182-080		C-CAP, S 2200P-50 B	C411	87-018-214-080		CAP TC U 0.1-50F
C102	87-016-669-080		C-CAP, S 0.1-25 K B	C601	87-010-197-080		CAP, CHIP 0.01 DM
C103	87-016-669-080		C-CAP, S 0.1-25 K B	C602	87-016-251-040		CAP, E 220-16 SMG
C104	87-016-669-080		C-CAP, S 0.1-25 K B	C603	87-010-196-080		CHIP CAPACITOR, 0.1-25
C105	87-010-404-040		CAP, E 4.7-50 SME	C706	87-010-184-080		CHIP CAPACITOR 3300P(K)
C106	87-010-369-080		C-CAP, S 0.033-25 K B	C707	87-010-184-080		CHIP CAPACITOR 3300P(K)
C107	87-010-197-080		CAP, CHIP 0.01 DM	C708	87-010-184-080		CHIP CAPACITOR 3300P(K)
C108	87-010-401-040		CAP, E 1-50 SME	C709	87-010-184-080		CHIP CAPACITOR 3300P(K)
C109	87-010-382-040		CAP, E 22-25 SME	C801	87-010-197-080		CAP, CHIP 0.01 DM
C110	87-010-213-080		C-CAP, S 0.015-50 B	C802	87-010-197-080		CAP, CHIP 0.01 DM
C111	87-010-263-040		CAP, E 100-10	C803	87-010-384-040		CAP, E 100-25 SME
C112	87-010-197-080		CAP, CHIP 0.01 DM	C804	87-010-196-080		CHIP CAPACITOR, 0.1-25
C113	87-010-369-080		C-CAP, S 0.033-25 K B	C805	87-010-196-080		CHIP CAPACITOR, 0.1-25
C114	87-010-369-080		C-CAP, S 0.033-25 K B	C806	87-010-196-080		CHIP CAPACITOR, 0.1-25
C115	87-010-369-080		C-CAP, S 0.033-25 K B	C807	87-010-313-080		CAP, CHIP 18P
C116	87-012-158-080		C-CAP, S 390P-50 CH	C808	87-010-313-080		CAP, CHIP 18P
C117	87-012-154-080		C-CAP, S 150P-50 CH	C809	87-010-178-080		CHIP CAP 1000P
C118	87-010-401-040		CAP, E 1-50 SME	C810	87-010-178-080		CHIP CAP 1000P
C119	87-010-311-080		CAP 12P	C811	87-010-178-080		CHIP CAP 1000P
C120	87-010-596-080		CAP, S 0.047-16	C812	87-010-178-080		CHIP CAP 1000P
				C813	87-010-405-040		CAP, E 10-50
				C814	87-010-405-040		CAP, E 10-50

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C815	87-010-318-080		C-CAP,S 47P-50 CH	J851	87-009-502-010		JACK,PIN 1P Y EARTH
C816	87-010-318-080		C-CAP,S 47P-50 CH	L101	87-005-196-080		COIL,10UH
C851	87-010-197-080		CAP, CHIP 0.01 DM	L102	87-005-196-080		COIL,10UH
C852	87-010-197-080		CAP, CHIP 0.01 DM	L151	87-005-204-080		COIL,47UH
C853	87-010-196-080		CHIP CAPACITOR,0.1-25	L301	87-A50-095-010		COIL,68UH RCR875D
C854	87-010-196-080		CHIP CAPACITOR,0.1-25	L302	87-005-469-080		COIL 4.7UH FLR50
C855	87-010-197-080		CAP, CHIP 0.01 DM	L851	87-005-196-080		COIL,10UH
C856	87-012-140-080		CAP 470P	L852	87-005-466-080		COIL,2.7UH J FLR50
C857	87-012-140-080		CAP 470P	L853	87-005-196-080		COIL,10UH
C858	87-010-322-080		C-CAP,S 100P-50 CH	L891	87-005-196-080		COIL,10UH
C859	87-016-459-040		CAP,E 470-10 SMG	L901	87-005-196-080		COIL,10UH
C860	87-010-405-040		CAP,E 10-50	L941	87-005-196-080		COIL,10UH
C861	87-010-197-080		CAP, CHIP 0.01 DM	M601	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
C862	87-010-405-040		CAP,E 10-50	R130	87-022-364-080		C-RES,S 82K-1/10W F
C863	87-010-197-080		CAP, CHIP 0.01 DM	R131	87-022-364-080		C-RES,S 82K-1/10W F
C864	87-010-197-080		CAP, CHIP 0.01 DM	R132	87-022-364-080		C-RES,S 82K-1/10W F
C865	87-010-197-080		CAP, CHIP 0.01 DM	R133	87-022-364-080		C-RES,S 82K-1/10W F
C866	87-010-197-080		CAP, CHIP 0.01 DM	R134	87-022-364-080		C-RES,S 82K-1/10W F
C891	87-010-405-040		CAP,E 10-50	R135	87-022-364-080		C-RES,S 82K-1/10W F
C892	87-010-197-080		CAP, CHIP 0.01 DM	SW601	87-036-109-010		PUSH SWITCH
C893	87-010-322-080		C-CAP,S 100P-50 CH	SW602	87-036-109-010		PUSH SWITCH
C901	87-010-197-080		CAP, CHIP 0.01 DM	SW603	87-036-109-010		PUSH SWITCH
C903	87-010-197-080		CAP, CHIP 0.01 DM	X801	87-030-270-080		VIB,XTAL 16.9344MHZ
C904	87-010-196-080		CHIP CAPACITOR,0.1-25	X901	87-030-264-080		CERA LOCK(MU)12.0MHZ
C905	87-010-196-080		CHIP CAPACITOR,0.1-25	X902	87-A70-145-080		VIB,CER 33.86MHZ CSTMXW0H3
C906	87-010-405-040		CAP,E 10-50	X903	87-A70-152-080		VIB,CER 45.00MHZ CSAMXZ040
C931	87-010-805-080		CAP, S 1-16	X904	87-A70-084-080		VIB,XTAL 13.5MHZ-50P
C932	87-010-197-080		CAP, CHIP 0.01 DM				
C933	87-010-322-080		C-CAP,S 100P-50 CH				
C943	87-010-405-040		CAP,E 10-50	T-T C.B			
C944	87-010-805-080		CAP, S 1-16	C411	87-018-214-080		CAP TC U 0.1-50F
C945	87-010-154-080		CAP CHIP 10P	CON8	87-A60-156-010		CONN,8P H FE
C946	87-010-154-080		CAP CHIP 10P	LED411	87-070-288-010		LED,GL380
C947	87-010-316-080		C-CAP,S 33P-50 CH	M401	87-A90-036-010		MOT ASSY,RF-300CA-11
C948	87-010-316-080		C-CAP,S 33P-50 CH	PS401	87-A90-156-010		SNSR,SG-240
C949	87-010-805-080		CAP, S 1-16	Q411	87-A30-031-010		P-TR,PT380F
C952	87-010-805-080		CAP, S 1-16	S401	87-036-109-010		PUSH SWITCH
C953	87-010-196-080		CHIP CAPACITOR,0.1-25				
C954	87-010-196-080		CHIP CAPACITOR,0.1-25	LED C.B			
C955	87-010-196-080		CHIP CAPACITOR,0.1-25	LED701	87-017-733-080		LED,SEL1250SMTP5 RED
C956	87-010-805-080		CAP, S 1-16	LED702	87-017-733-080		LED,SEL1250SMTP5 RED
C957	87-010-805-080		CAP, S 1-16	LED703	87-017-733-080		LED,SEL1250SMTP5 RED
C958	87-010-805-080		CAP, S 1-16				
C959	87-010-805-080		CAP, S 1-16	VIDEO SW C.B<YVOS1NDM,VOS DSM>			
C960	87-010-805-080		CAP, S 1-16	S851	87-A90-238-010		SW,SL 1-1-3 9L
C961	87-010-805-080		CAP, S 1-16				
C962	87-010-805-080		CAP, S 1-16	DRIVE C.B			
C963	87-010-196-080		CHIP CAPACITOR,0.1-25	CN3	87-009-349-010		CONN,6P H WHT PH
C991	87-010-322-080		C-CAP,S 100P-50 CH	M20	87-045-358-010		MOT,RF-310TA 43
C992	87-010-322-080		C-CAP,S 100P-50 CH	M21	87-045-356-010		MOT,RF-310TA 30
CN3	86-ZG1-609-010		CONN ASSY,6P	SW1	87-A90-042-010		SW, LEAF MSW-17310MVP0
CN3	87-A60-133-010		CONN,8P V FE				
CN6	87-A60-160-010		CONN,12P H FE				
CN7	86-ZG1-606-010		CONN ASSY 2P				
CN7	86-ZG1-606-010		CONN ASSY 2P				
CN101	87-A60-424-010		CONN,16P V TOC-B				
CN102	87-009-034-010		CONN,6P PH V				
CN301	87-A60-154-010		CONN,6P H FE				
CN302	86-ZG1-620-010		CONN ASSY,2P VIDEO-SW				
CN851	87-A60-109-010		CONN,2P V S2M-2W				

- Regarding connectors, they are not stocked as they are not the initial order items.
The connectors are available after they are supplied from connector manufacturers upon the order is received.

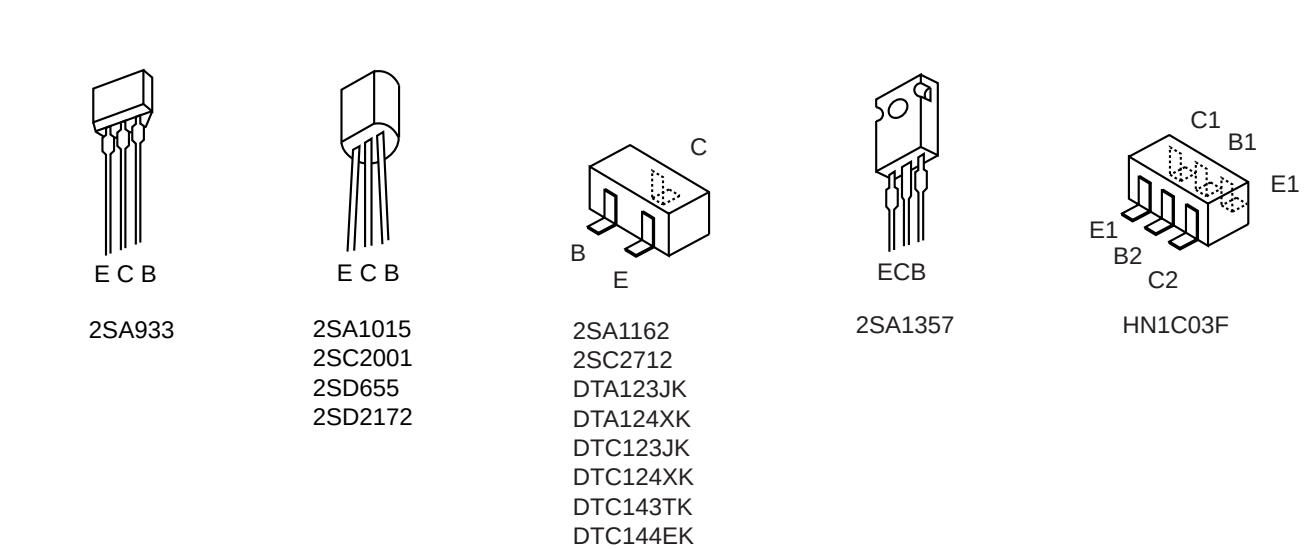
○チップ抵抗部品コード／CHIP RESISTOR PART CODE



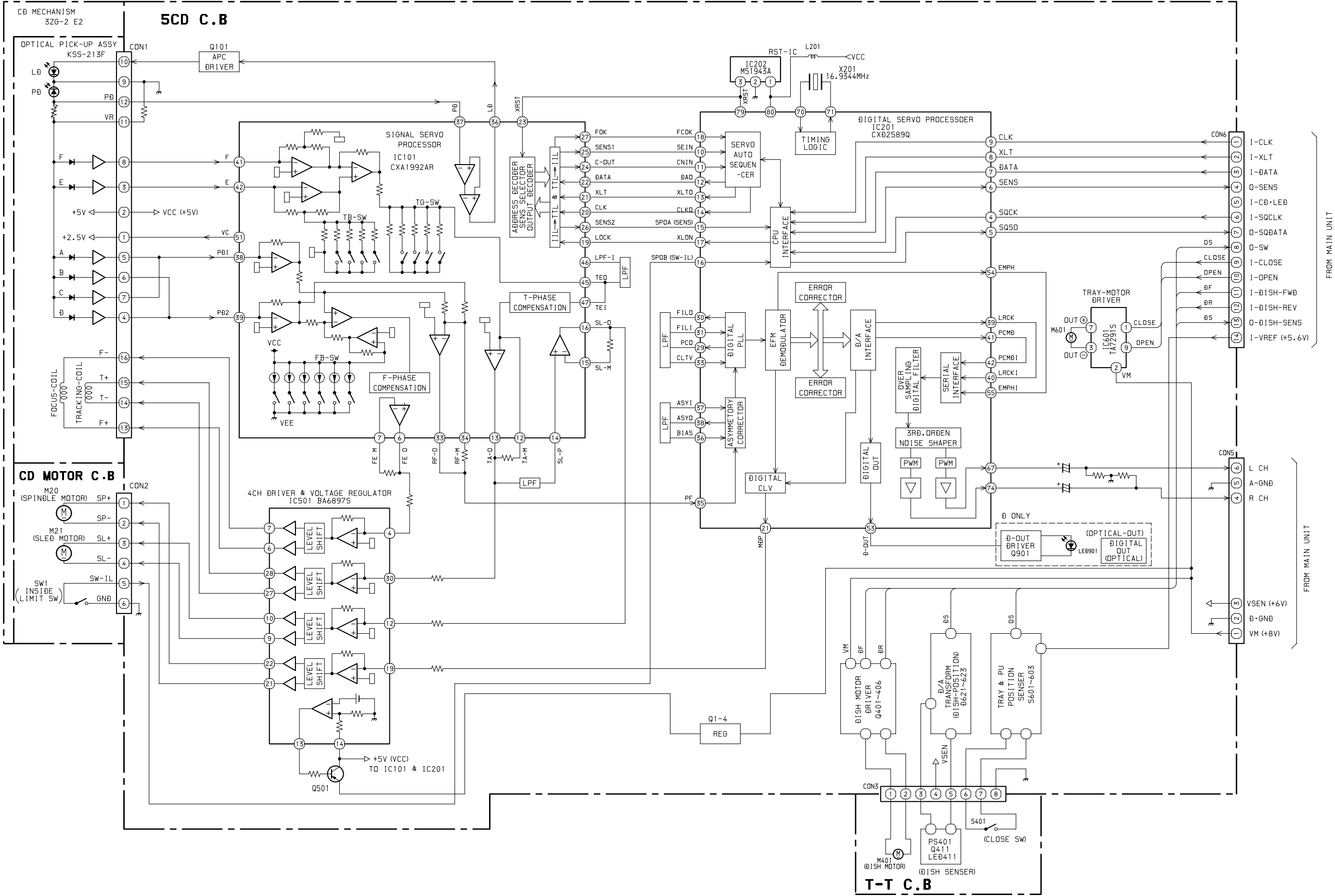
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード Resistor Code : A
				外形／Form	L	W	t	
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

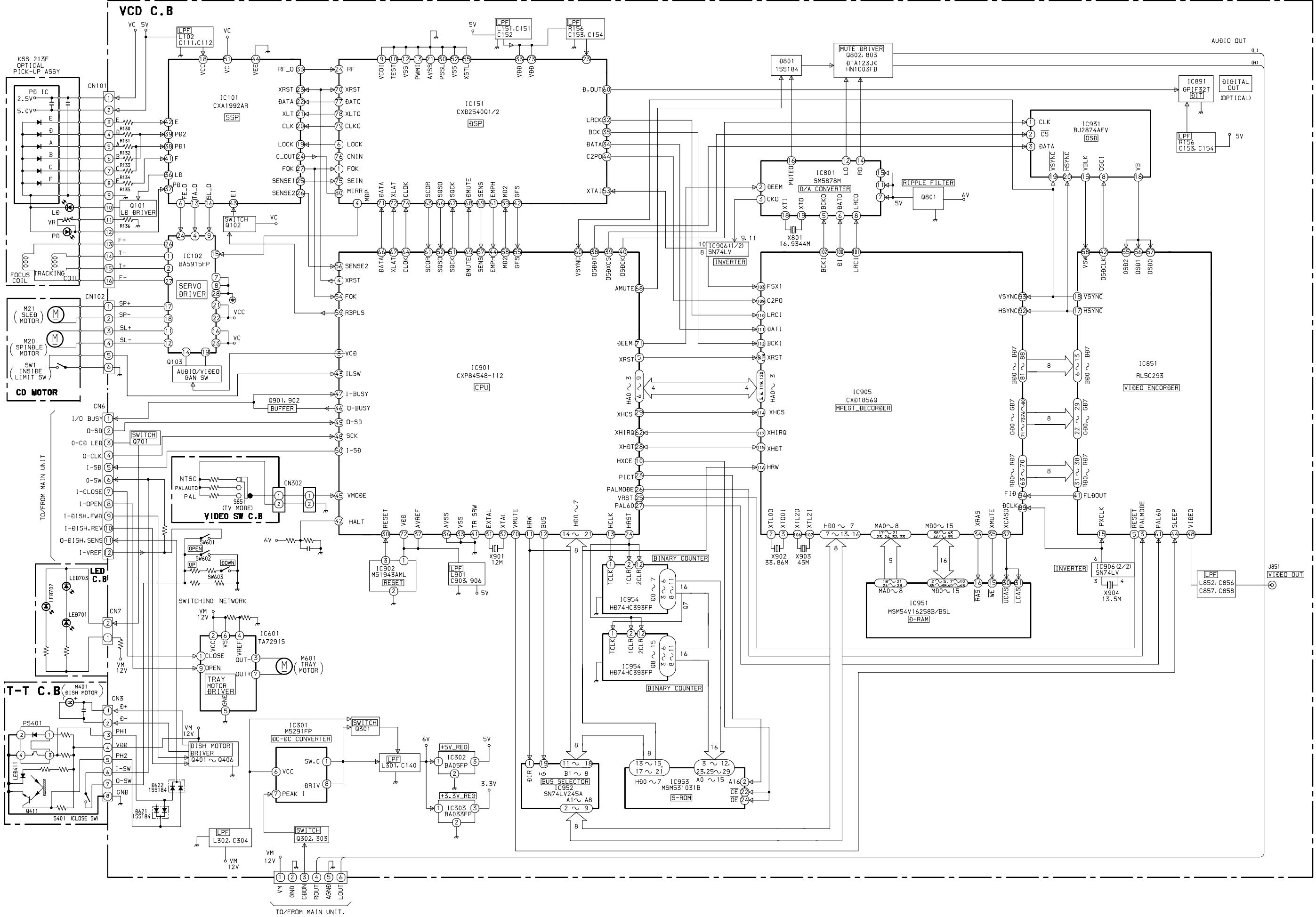
TRANSISTOR ILLUSTRATION

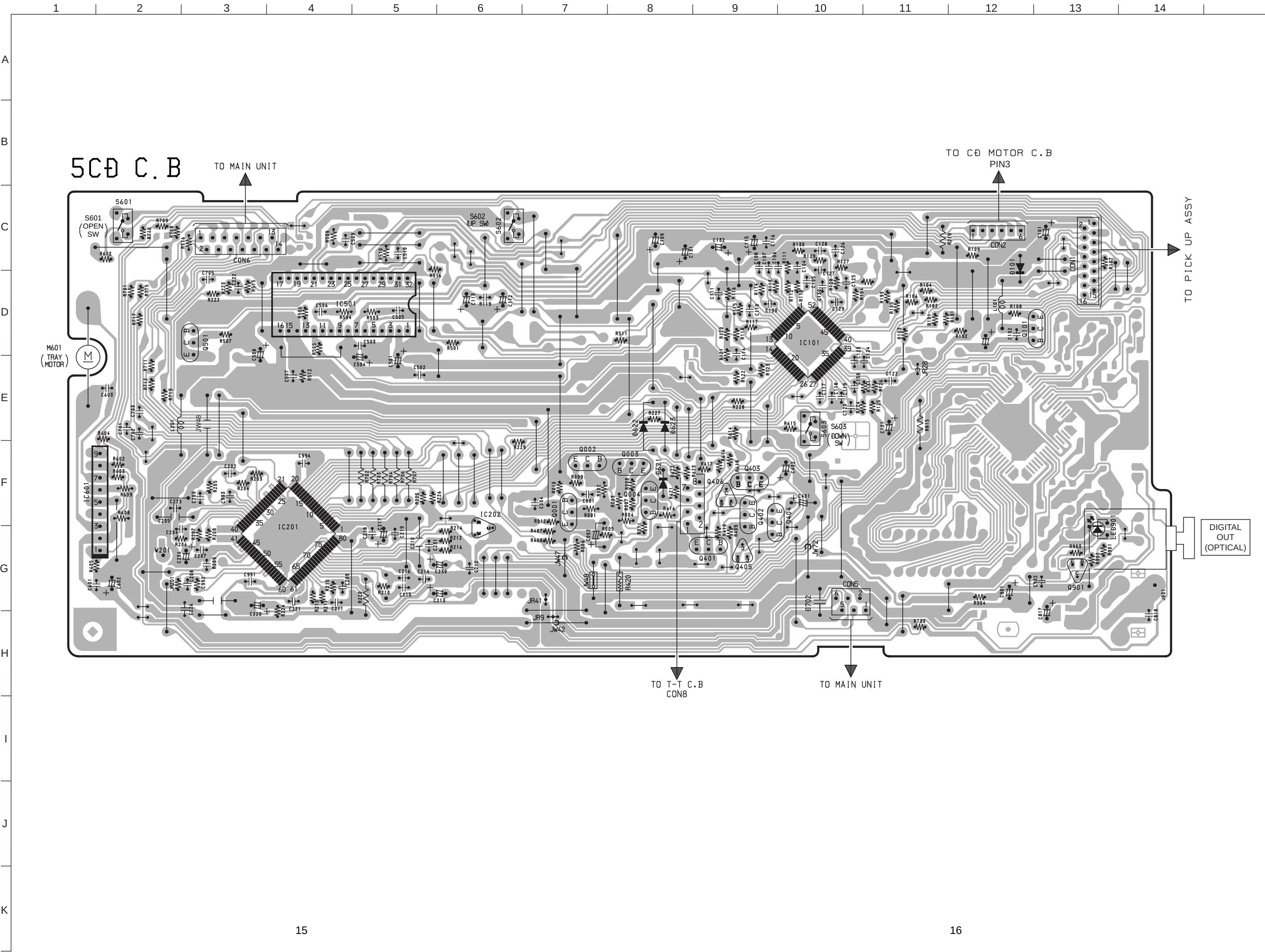


BLOCK DIAGRAM-1 (YSDFNSHCM, YSDNSHM, SDFNSHM)

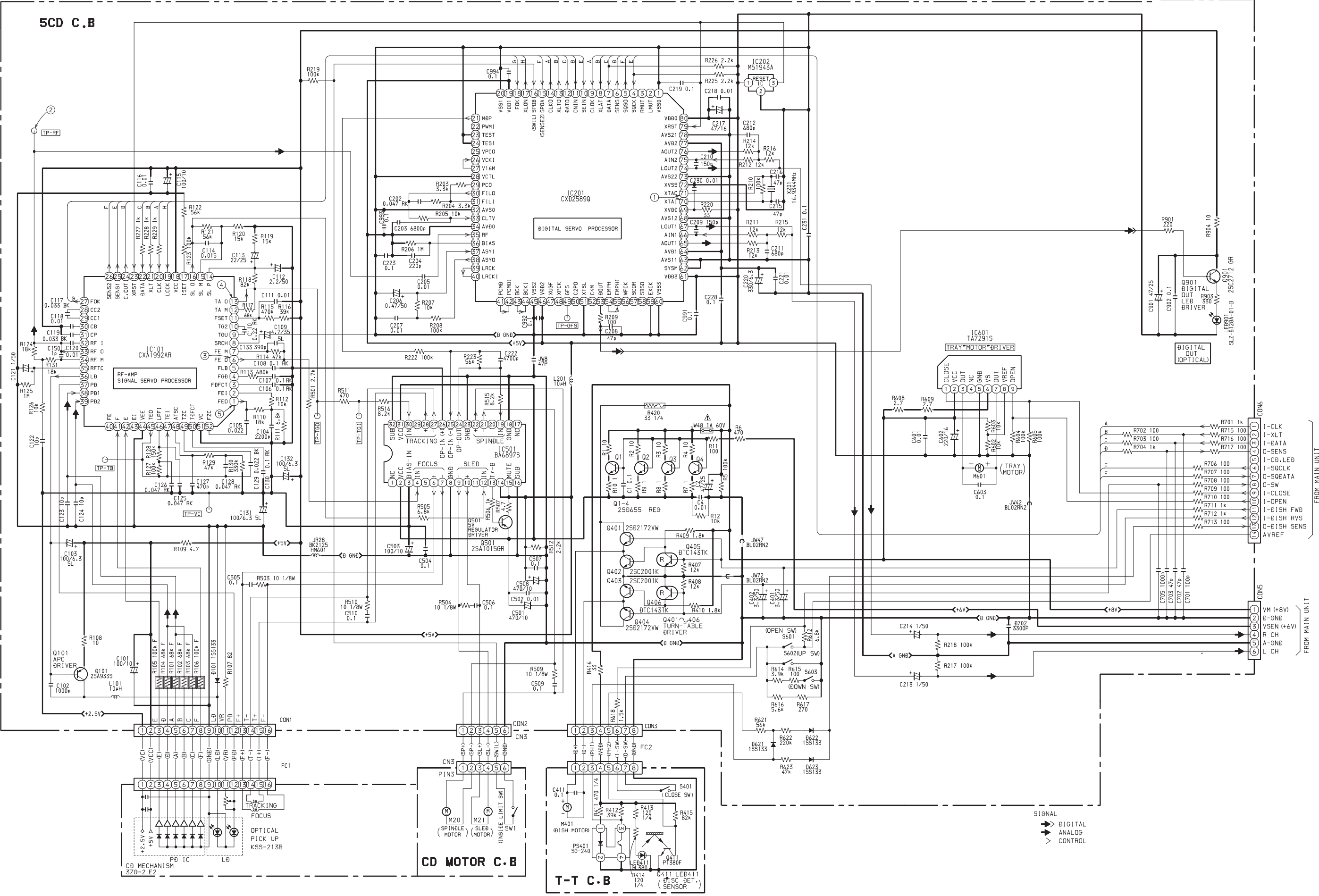


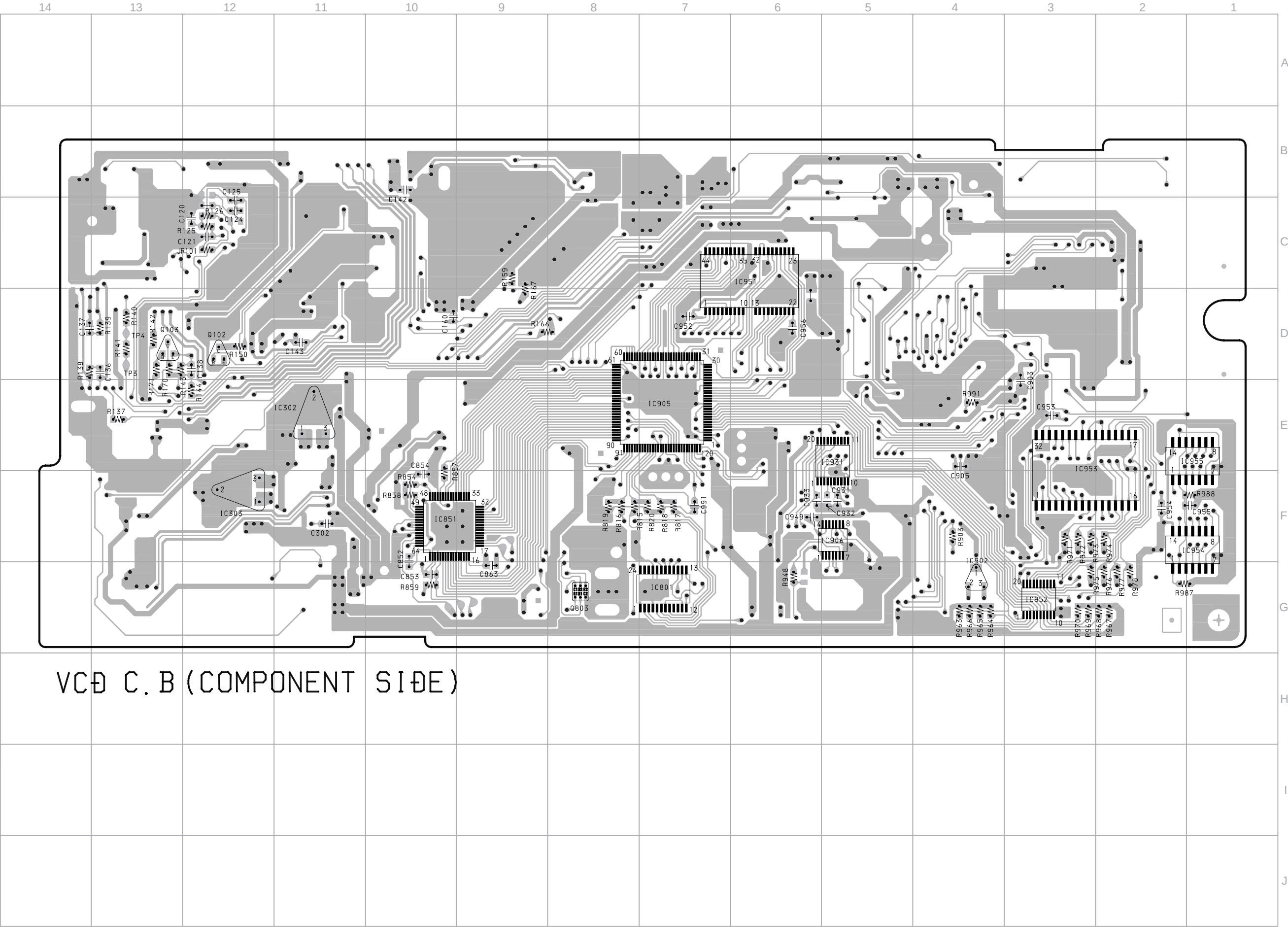
BLOCK DIAGRAM-2 (VOS1NDSM, YVOS1NDM)

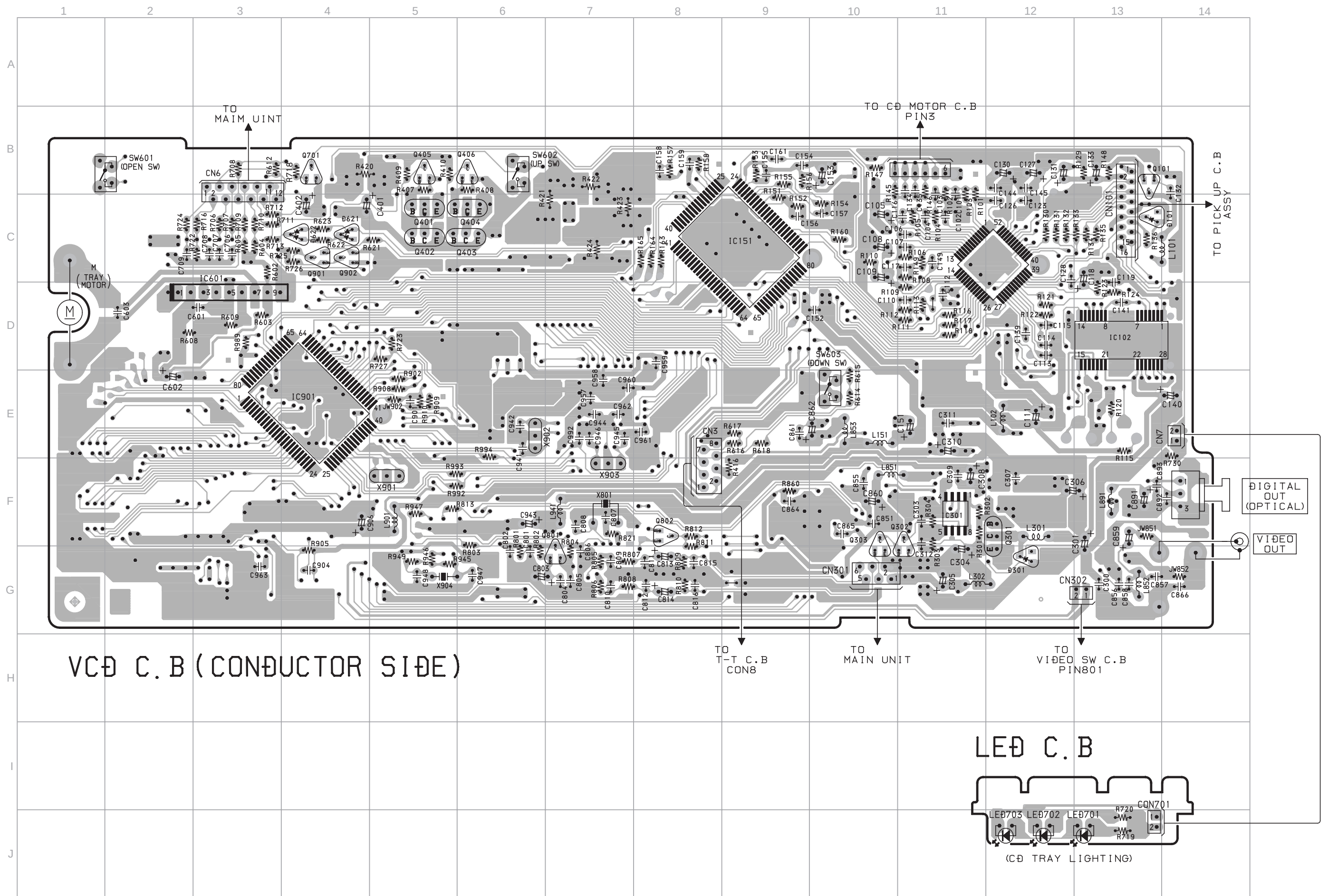




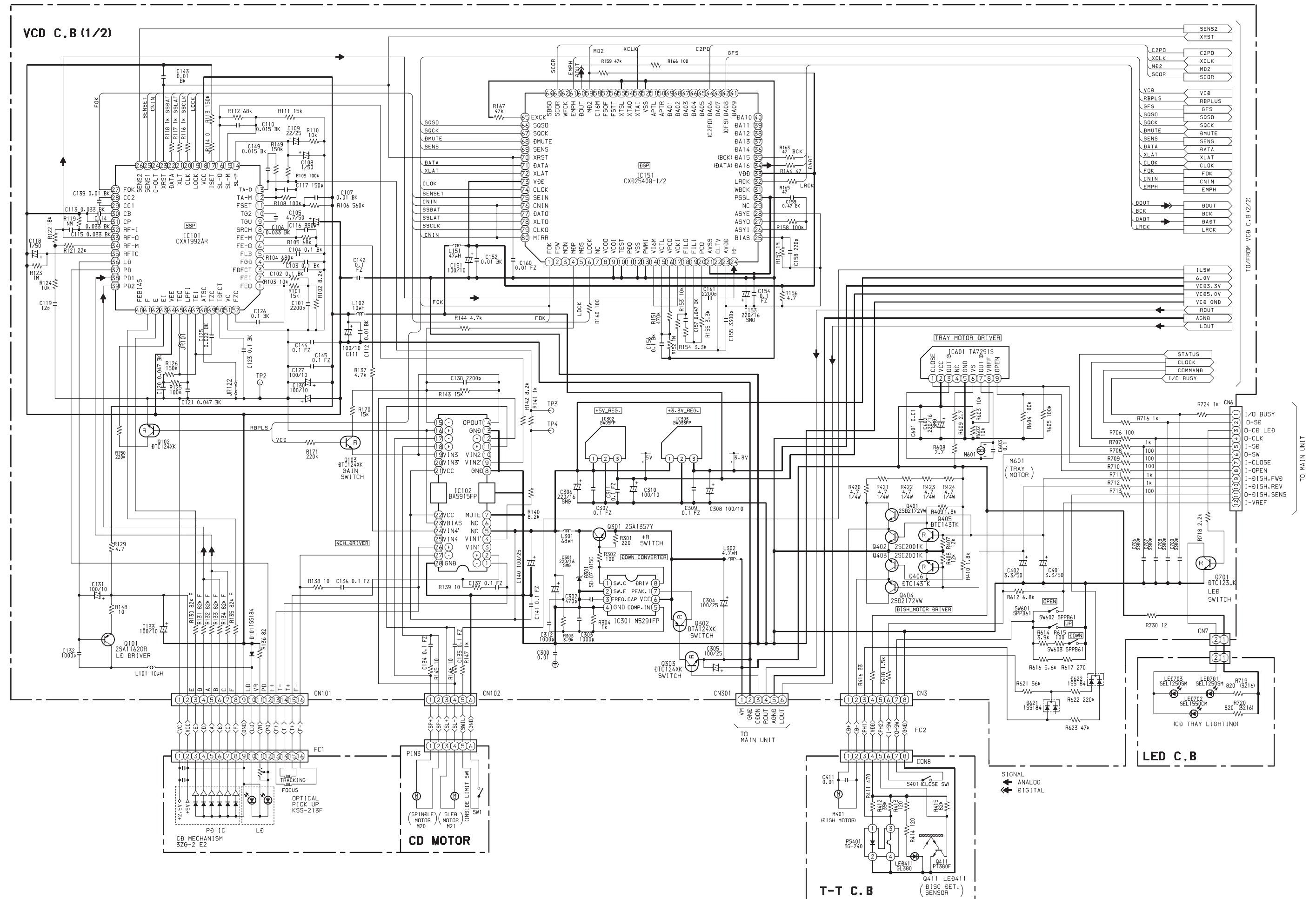
SCHEMATIC DIAGRAM-1 (YSDFNSHCM, YSDNSHM, SDFNSHM)





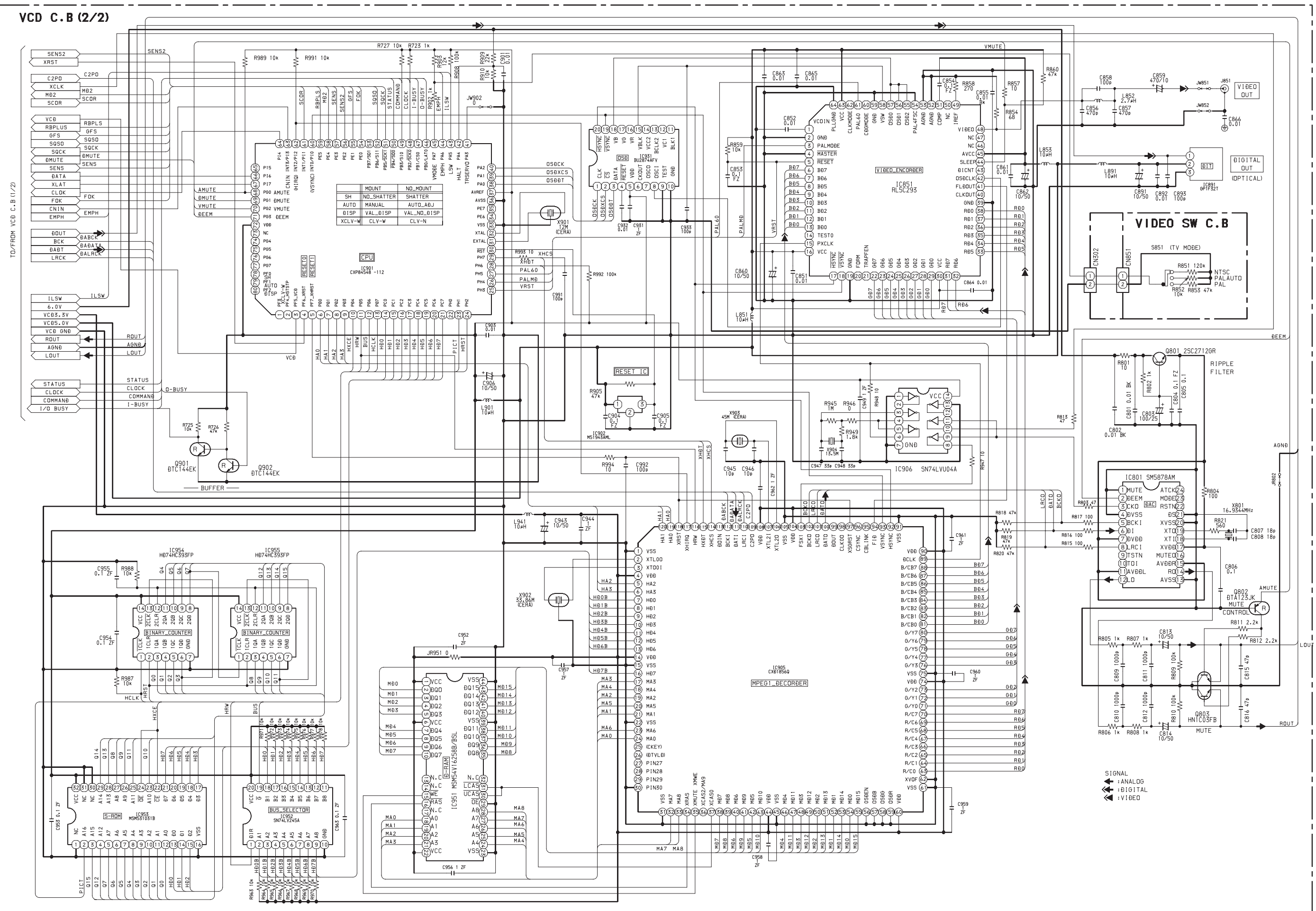


SCHEMATIC DIAGRAM-2 (VOS1NDSM, YVOS1NDM 1/2)

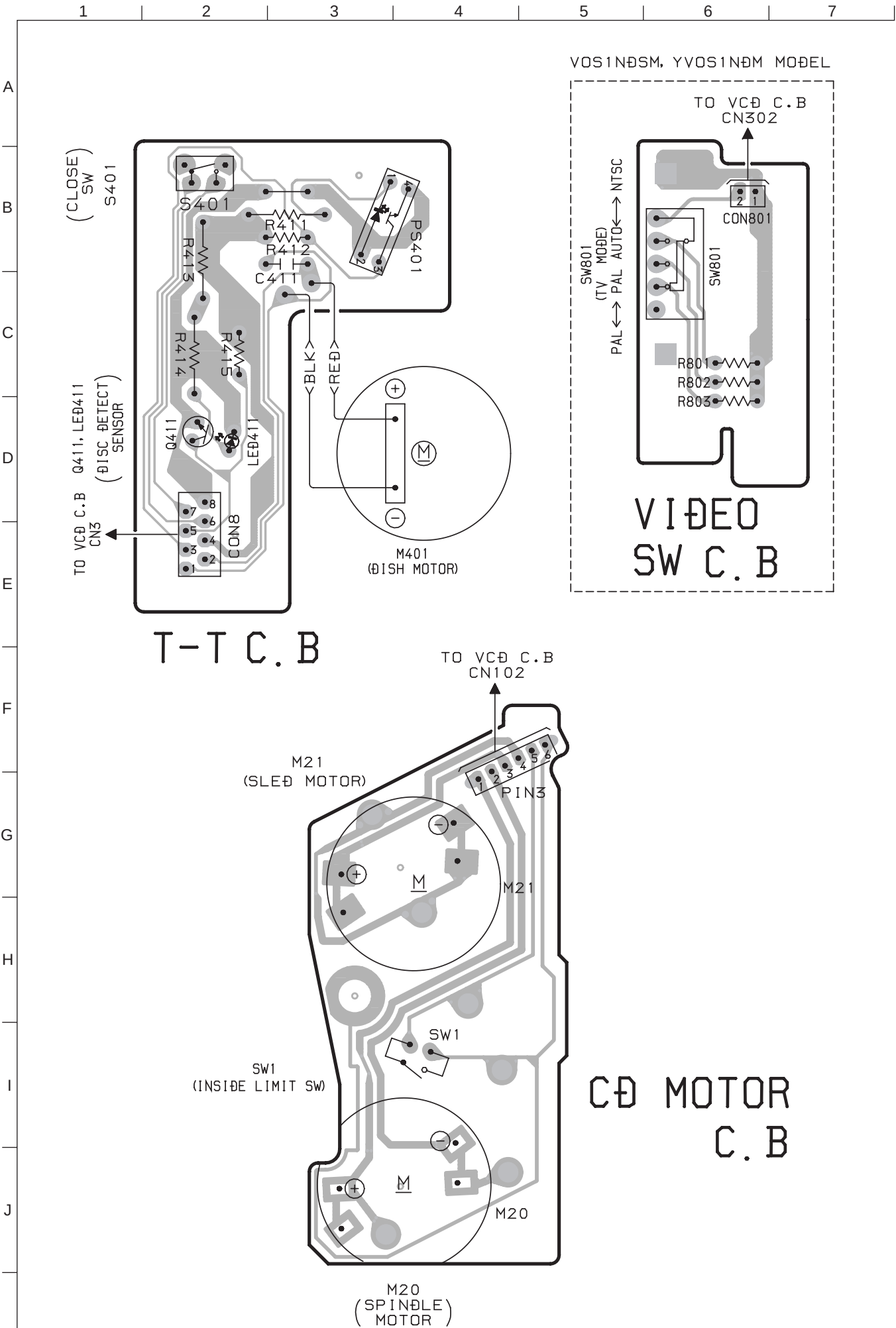


SCHEMATIC DIAGRAM-3 (VOS1NDSM, YVOS1NDM 2/2)

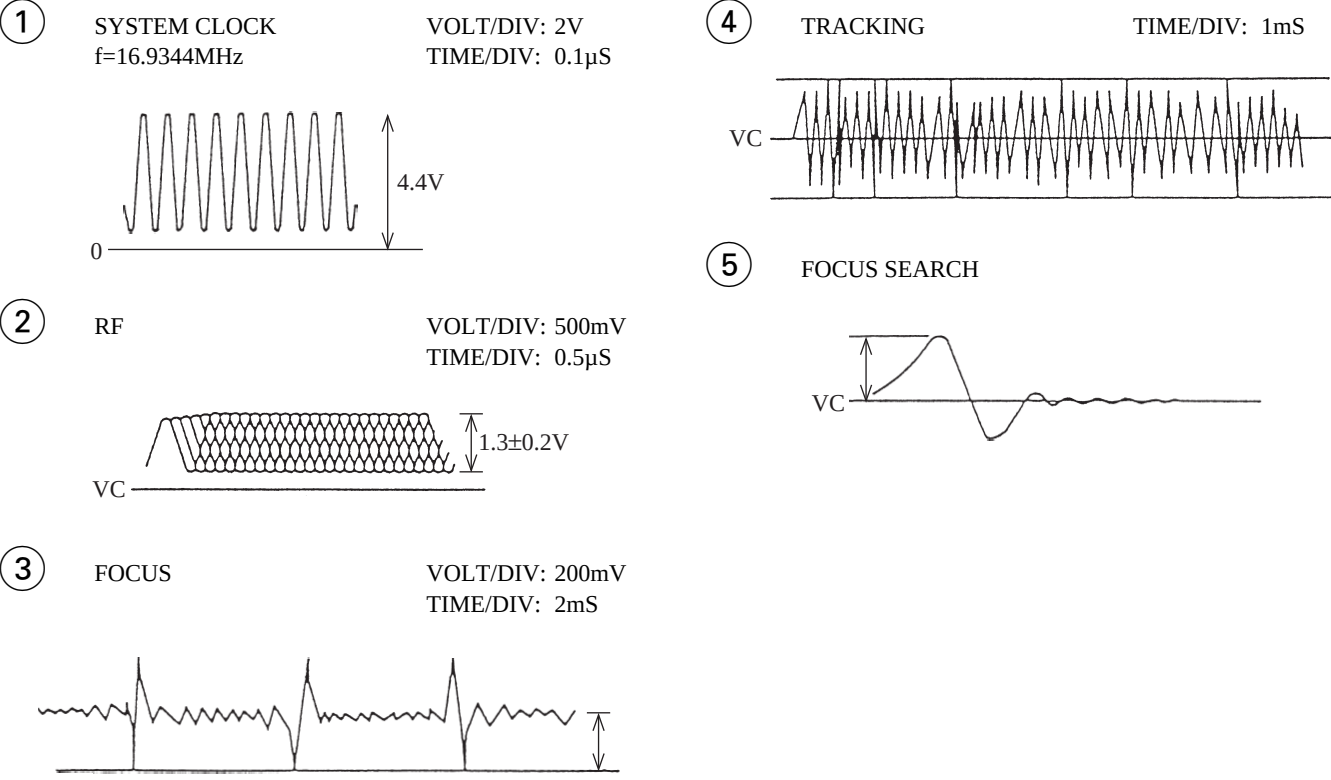
VCD C.B (2/2)



WIRING-3

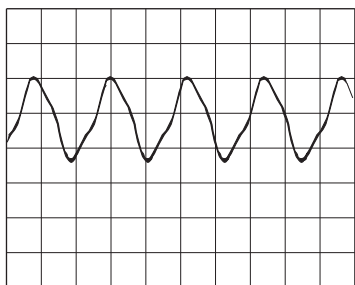


WAVE FORM



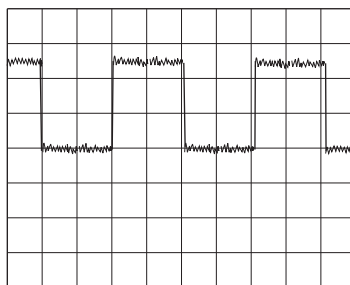
⑥ IC905 Pin ⑩ (XTL20)

VOLT/DIV: 2V
TIME/DIV: 10nS



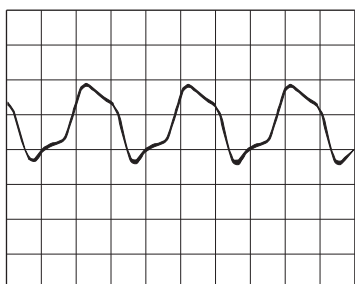
⑩ IC851 Pin ④ (FLDOUT)

VOLT/DIV: 2V
TIME/DIV: 10mS



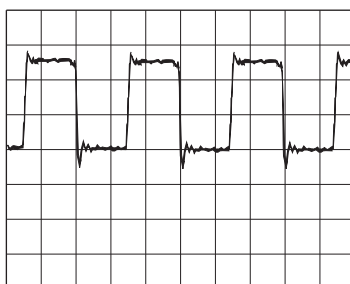
⑦ IC905 Pin ② (XTL00)

VOLT/DIV: 2V
TIME/DIV: 10nS



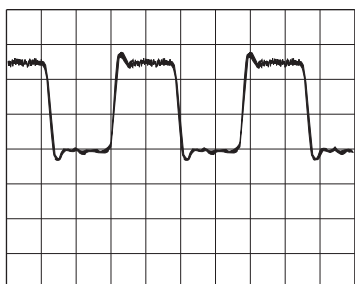
⑪ IC851 Pin ④ (OSDCLK)

VOLT/DIV: 2V
TIME/DIV: 50nS



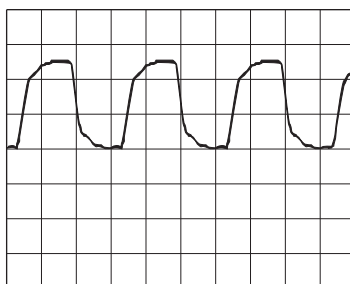
⑧ IC906 Pin ⑥

VOLT/DIV: 2V
TIME/DIV: 20nS



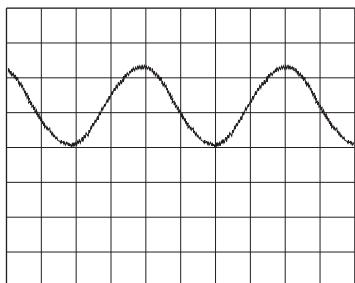
⑫ IC801 Pin ③ (CKO)

VOLT/DIV: 2V
TIME/DIV: 20nS



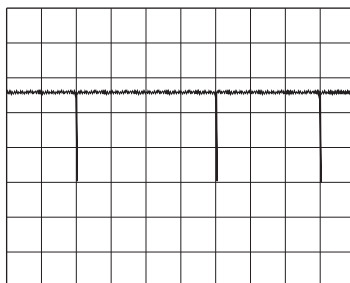
⑨ IC901 Pin ③ (EXTAL)

VOLT/DIV: 2V
TIME/DIV: 20nS



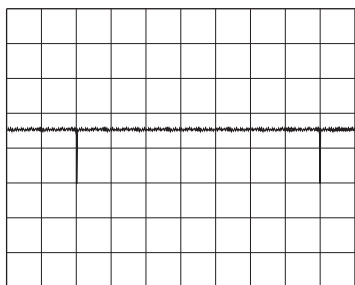
⑬ IC952 Pin ⑪ (B8)

VOLT/DIV: 2V
TIME/DIV: 1mS



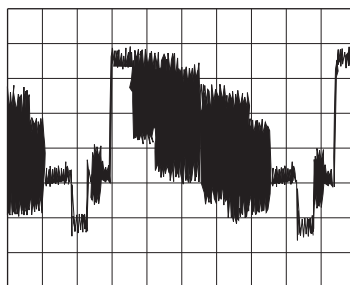
14 IC952 Pin 9 (A8)

VOLT/DIV: 2V
TIME/DIV: 1mS



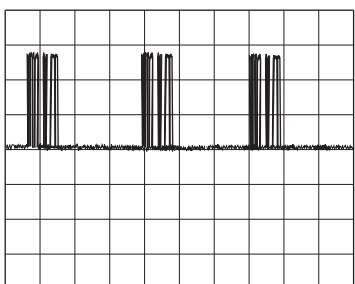
IC851 Pin 61 (PAL60)
PAL DISC PAL

VOLT/DIV: 200mV
TIME/DIV: 10μS



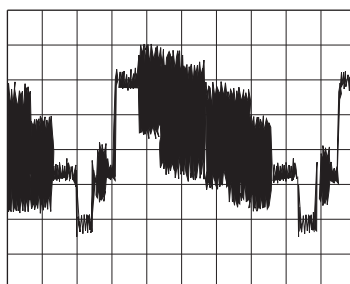
15 IC931 Pin 15 (VBLK)

VOLT/DIV: 2V
TIME/DIV: 20μS



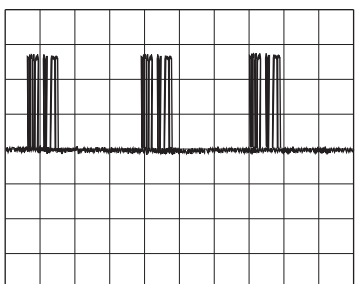
IC851 Pin 61 (PAL60)
NTSC DISC PAL AUTO

VOLT/DIV: 200mV
TIME/DIV: 10μS



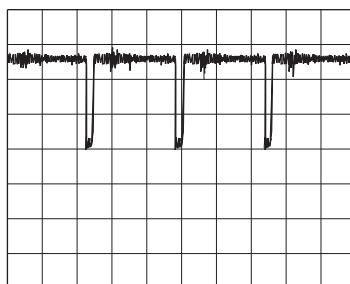
16 IC931 Pin 18 (VB)

VOLT/DIV: 2V
TIME/DIV: 20μS



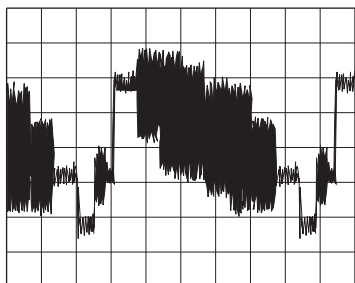
18 IC851 Pin 17 (H SYNC)
NTSC

VOLT/DIV: 2V
TIME/DIV: 50μS



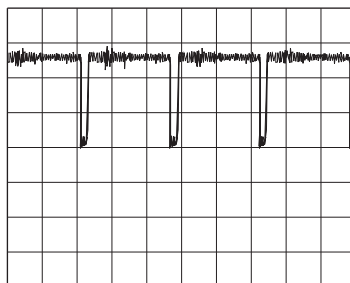
17 IC851 Pin 61 (PAL60)
NTSC DISC NTSC

VOLT/DIV: 200mV
TIME/DIV: 10μS



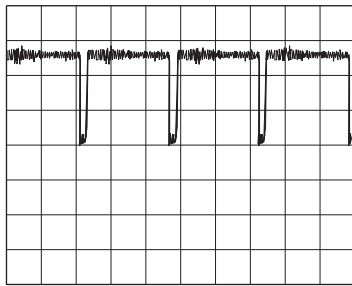
IC851 Pin 17 (H SYNC)
PAL AUTO

VOLT/DIV: 2V
TIME/DIV: 50μS



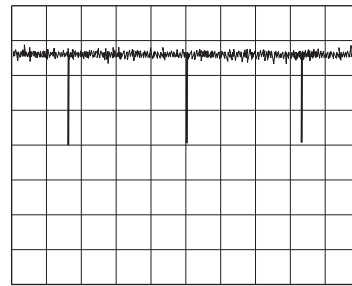
IC851 Pin ⑰ ($\overline{\text{H SYNC}}$)
PAL

VOLT/DIV: 2V
TIME/DIV: 50 μ S



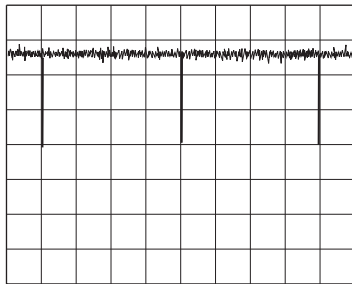
IC851 Pin ⑱ ($\overline{\text{V SYNC}}$)
PAL

VOLT/DIV: 2V
TIME/DIV: 10mS



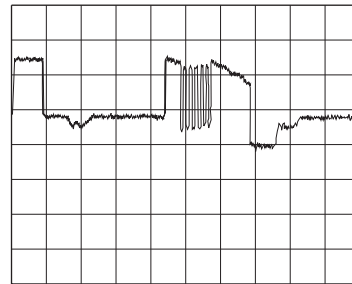
⑲ IC851 Pin ⑱ ($\overline{\text{V SYNC}}$)
NTSC

VOLT/DIV: 2V
TIME/DIV: 10mS



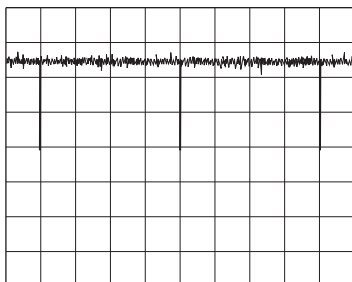
⑳ CN6 Pin ⑪ (O-DISH, SENS)

VOLT/DIV: 2V
TIME/DIV: 200mS



IC851 Pin ⑱ ($\overline{\text{V SYNC}}$)
PAL AUTO

VOLT/DIV: 2V
TIME/DIV: 10mS



IC DESCRIPTION

IC, CXD2589Q

Pin No.	Pin Name	I/O	Description
1, 20, 45, 60	VSS	—	GND.
2	LMUT	O	Lch-“0” detect flag.
3	RMUT	O	Rch-“0” detect flag.
4	SQCK	I	Clock input for SQSO read out.
5	SQSO	O	SubQ 80 bit serial output.
6	SENS	O	SENS signal output to CPU.
7	DATA	I	Serial data input from CPU.
8	XLAT	I	Latch input from CPU, Latch serial data at fall down.
9	CLOK	I	Clock input to serial data transfer from CPU.
10	SEIN	I	SENS input from SSP.
11	CNIN	I	Numbers of track jump are counted and input.
12	DATO	O	Serial data output to SSP.
13	XLTO	O	Serial-data latch output to SSP. Latch at fall down.
14	CLKO	O	Clock output for serial data transfer to SSP.
15	SPOA	I	Microcomputer expansion interface. (Input A)
16	SPOB	I	Microcomputer expansion interface. (Input B)
17	XLON	O	Microcomputer expansion interface. (Output)
18	FOK	I	Focus OK input terminal. Used for SENS output and servo-auto sequencer.
19, 46, 61, 80	VDD	—	Power supply. (+5V)
21	MDP	O	Servo control for spindle motor.
22	PWMI	I	External control input for spindle motor.
23	TEST	I	TEST terminal. (Connected to GND)
24	TESI	I	TEST terminal. (Connected to GND)
25	VPCO	O	Charge pump output for extensive EFM PLL.
26	VCKI	I	VCO2 oscillator input for extensive EFM PLL.
27	V16M	O	VCO2 oscillator output for extensive EFM PLL.
28	VCTL	I	VCO2 control voltage input for extensive EFM PLL.
29	PCO	O	Charge pump output for master PLL.
30	FILO	O	Filter (slave = digital PLL) output for master PLL.
31	FILI	I	Filter input for master PLL.
32	AVSS	—	Analog GND.
33	CLTV	I	VCO control voltage input for master.
34	AVDD	—	Analog power. (+5V)
35	RF	I	EFM signal input.
36	BIAS	I	Constant current input to asymmetry circuit.
37	ASYI	I	Comparison voltage input to asymmetry circuit.
38	ASYO	O	EFM full-swing output. (L=VSS, H=VDD)
39	LRCK	O	D/A interface, LR clock output f=FS.
40	LRCKI	I	LR clock input.
41	PCMD	O	D/A interface, serial data output. (2's COMP, MSB first)
42	PCMDI	I	D/A interface, serial data input. (2's COMP, MSB first)

Pin No.	Pin Name	I/O	Description
43	BCK	O	D/A interface bit clock output.
44	BCKI	I	D/A interface bit clock input.
47	XUGF	O	XUGF output, MNT1 or RPCK output by switching command.
48	XPCK	O	XPLCK output, MNT0 output by switching command.
49	GFS	O	GFS output, MNT3 or XRAOF output by switching command.
50	C2PO	O	C2PO output, GTOPO output by switching command.
51	XTSL	I	X'tal select input terminal, X'tal: 16.9344MHz = "L" 33.8688MHz = "H".
52	C4M	O	4.2336MHz output, Output 1/4 divided frequency of VCKI at CAV-W mode.
53	DOUT	O	Digital Out connector output signal.
54	EMPH	O	"H" when the playback disc has emphasis. "L" when it does not.
55	EMPHI	I	De-emphasis ON/OFF, "H" when ON, "L" when OFF.
56	WFCK	O	WFCK output.
57	SCOR	O	H output when the subcode sync S0 or S1 is detected.
58	SESO	O	Serial output for SubP-W.
59	EXCK	I	SBSO read out clock input.
62	SYSM	I	Mute input terminal, Active the "H" setting.
63	AVSS	—	Analogue GND.
64	AVDD	—	Analogue power supply. (+5V)
65	AOUT1	O	Lch/analogue output terminal.
66	AIN1	I	Lch/OP AMP input terminal.
67	LOUT1	O	Lch/LINE output terminal.
68	AVSS	—	Analogue GND.
69	XVDD	—	Power supply for master clock.
70	XTAI	I	Input terminal for crystal oscillator circuit. Input external master clock from this terminal.
71	XTAO	O	Output terminal for crystal oscillator circuit.
72	XVSS	—	GND terminal for master clock.
73	AVSS	—	Analogue GND.
74	LOUT2	O	Rch/LINE output terminal.
75	AIN2	I	Rch/OP AMP input terminal.
76	AOUT2	O	Rch/analogue output terminal.
77	AVDD	—	Analogue power supply. (+5V)
78	AVSS	—	Analogue GND.
79	XRST	I	Reset system at "L" setting.

Note)

- PCMD is the two's complement output with MSB first.
- GTOPO monitors the protection status of the Frame Sync. (H: Sync protection window opened).
- XUGF is the Frame Sync negative pulse which is obtained from the EFM signal. This is the signal before the sync protection.
- XPLCK is the inverted signal of the EFM PLL clock. The PLL works so that the fall-down edge and the changed point of the EFM signal agree.
- GFS is the signal that goes "H" when the Frame Sync and the internally inserted timing agree.
- RFCK is the signal having 136 micro-seconds (during normal speed) that is generated to have the same accuracy as X'tal.
- C2PO is the signal indicating the error status of the data.
- XRAOF is the signal that is generated when the 16k RAM goes outside the jitter margin $\pm 4F$.

IC, CXA1992AR

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFCT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FE_O	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TA_M	I	Tracking amplifier inverted input pin.
13	TA_O	O	Tracking drive output.
14	SL_P	I	Sled amplifier non-inverted input pin.
15	SL_M	I	Sled amplifier inverted input pin.
16	SL_O	O	Sled drive output.
17	ISSET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected.
18	Vcc	I	Power supply.
19	LOCK	I	“L” setting starts sled disorder-prevention circuit. (Not pull-up resistance)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at “L” setting. (No pull-up resistance)
24	C_OUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor.
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.

Pin No.	Pin Name	I/O	Description
32	RF_I	I	Input terminal by capacity combination of RF summing amplifier.
33	RF_O	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.
34	RF_M	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF_M and RFO terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level.
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38, 39	PD1, PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier.
41, 42	F, E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	—	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)
44	VEE	—	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC.
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

IC, CXD2540Q

Pin No.	Pin Name	I/O	Description
1	FOK	I	Focus OK input. Used for SENS output and the servo auto sequencer.
2	FSW	O	Spindle motor output filter switching output.
3	MON	O	Spindle motor on/off control output.
4	MDP	O	Spindle motor servo control.
5	MDS	O	
6	LOCK	O	High, when sampled value of GFS at 460Hz is high. Low, when sampled value of GFS at 460Hz is low by 8 times successively.
7	NC	—	Not used.
8	VCOO	O	Analog EFM PLL oscillation circuit output.
9	VCOI	I	Analog EFM PLL oscillation circuit input. f _{LOCK} =8.6436MHz.
10	TEST	I	TEST pin.
11	PDO	O	Analog EFM PLL charge pump output.
12	VSS	—	GND.
13	PWMI	I	Spindle motor external control input.
14	V16M	O	VCO2 oscillation output for the wide-band EFM PLL.
15	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL.
16	VPCO	O	Wide-band EFM PLL charge pump output.
17	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL.
18	FILO	O	Multiplier PLL (slave=digital PLL) filter output.
19	FILI	I	Multiplier PLL filter input.
20	PCO	O	Multiplier PLL charge pump output.
21	AVSS	—	Analog GND.
22	CLTV	I	Multiplier VCO1 control voltage input.
23	AVDD	—	Analog power supply (5V).
24	RF	I	EFM signal input.
25	BIAS	I	Constant current input of the asymmetry circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output.
28	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on.
29	NC	—	Not used.
30	PSSL	I	Audio data output mode switching input. Low: serial output; high: parallel output.
31	WDCK	O	D/A interface for 48-bit slot. Word clock f=2Fs.
32	LRCK	O	D/A interface for 48-bit slot. LR clock f=Fs.
33	VDD	—	Power supply (5V).
34	DA16	O	DA16 (MSB) output when PSSL=1. 48-bit slot serial data (two's complement, MSB first) when PSSL=0.
35	DA15	O	DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.
36	DA14	O	DA14 output when PSSL=1. 64-bit slot serial data (two's complement, LSB first) when PSSL=0.
37	DA13	O	DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0.
38	DA12	O	DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0.

Pin No.	Pin Name	I/O	Description
39	DA11	O	DA11 output when PSSL=1. GTOP output when PSSL=0.
40	DA10	O	DA10 output when PSSL=1. XUGF output when PSSL=0.
41	DA09	O	DA09 output when PSSL=1. XPLCK output when PSSL=0.
42	DA08	O	DA08 output when PSSL=1. GFS output when PSSL=0.
43	DA07	O	DA07 output when PSSL=1. RFCK output when PSSL=0.
44	DA06	O	DA06 output when PSSL=1. C2PO output when PSSL=0.
45	DA05	O	DA05 output when PSSL=1. XRAOF output when PSSL=0.
46	DA04	O	DA04 output when PSSL=1. MNT3 output when PSSL=0.
47	DA03	O	DA03 output when PSSL=1. MNT2 output when PSSL=0.
48	DA02	O	DA02 output when PSSL=1. MNT1 output when PSSL=0.
49	DA01	O	DA01 output when PSSL=1. MNT0 output when PSSL=0.
50	APTR	O	Aperture compensation control output. This pin outputs a high signal when the right channel is used.
51	APTL	O	Aperture compensation control output. This pin outputs a high signal when the left channel is used.
52	VSS	—	GND.
53	XTAI	I	Crystal oscillation circuit input.
54	XTAO	O	Crystal oscillation circuit output.
55	XTSL	I	Crystal selector input.
56	FSTT	O	2/3 frequency divider output for Pins 53 and 54.
57	FSOF	O	1/4 frequency divider output for Pins 53 and 54.
58	C16M	O	16.9344MHz output. (V16M output in CLV-W and CAV-W modes)
59	MD2	I	Digital-out on/off control. High: on; low: off
60	DOUT	O	Digital-out output.
61	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
62	WFCK	I	WFCK (write frame clock) output.
63	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected.
64	SBSO	O	Sub P to W serial output.
65	EXCK	I	SBSO readout clock input.
66	SQSO	O	Sub Q 80-bit and PCM peak, level meter and internal status outputs.
67	SQCK	I	SQSO readout clock input.
68	MUTE	I	High: mute; low: release
69	SENS	—	SENS output to CPU.
70	XRST	I	System reset. Reset when low.
71	DATA	O	Serial data input from CPU.
72	XLAT	O	Latch input from CPU. Serial data is latched at the falling edge.
73	VDD	—	Power supply (5V).
74	CLOK	O	Serial data transfer clock input from CPU.
75	SEIN	I	SENS input from SSP.
76	CNIN	I	Track jump count signal input.

Pin No.	Pin Name	I/O	Description
77	DATO	O	Serial data output to SSP.
78	XLTO	O	Serial data latch output to SSP. Latched at the falling edge.
79	CLKO	O	Serial data transfer clock output to SSP.
80	MIRR	I	Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer.

Notes)

- The 64-bit slot is an LSB first, two's complement output, and the 48-bit slot is an MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136μ.
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the ±28F jitter margin.

IC, SM5878M

Pin No.	Pin Name	I/O	Description
1	MUTE	I	MODE = H: Soft mute ON/OFF terminal. (Mute at H). MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H).
2	DEEM	I	De-emphasis ON/OFF terminal. (De-emphasis ON at H).
3	CKO	O	Oscillator clock output. (16.9344 MHz).
4	DVSS	—	Digital VSS terminal.
5	BCKI	I	Bit clock input terminal.
6	DI	I	Serial data input terminal.
7	DVDD	—	Digital VDD terminal.
8	LRCI	I	Sample rate clock (fs) input terminal. (H = L ch/L = R ch).
9	TSTN	I	Test input. ("H" or open during normal operation)
10	TO1	O	Test output 1. (Normally low level output).
11	AVDDL	—	Analog VDD terminal. (For L ch).
12	LO	O	Left channel analog output terminal.
13	AVSS	—	Analog VSS terminal.
14	RO	O	Right channel analog output terminal.
15	AVDDR	—	Analog VDD terminal. (For R ch).
16	MUTEO	O	Infinity zero detection output.
17	XVDD	—	X'tal system VDD terminal.
18	XTI	I	X'tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz).
19	XTO	O	X'tal oscillator terminal.
20	XVSS	—	X'tal system VSS terminal.
21	DS	I	Double-speed/normal playback selection. (Double-speed at H).
22	RSTN	I	Reset terminal. (Reset at L).
23	MODE	I	Soft mute/Attenuator mode selection. (Soft mute at H).
24	ATCK	I	Attenuator level setup clock (Ignored when MODE = H).

IC, CXD1856R

Pin No.	Pin Name	I/O	Description
1	VSS	—	GND.
2, 3	XTL0O, XTL0I	O/I	Video decoder master clock. Input the clock signal to the XTL0I or connect an external oscillator between XTL0I and XTL 0O. The recommend frequency is 27 MHz, 28.3636 MHz (NTSC 8fs) or 65.4686 MHz (PAL 8fs).
4	VDD	—	Power supply.
5, 6, 119, 120	HA0-HA3	I	This is the register address input terminal when the host interface is in the parallel mode. HA0 is the serial data input terminal in the serial mode. HA1 to HA3 must be fixed to the “L” level during the serial mode.
7-13, 16	HD0-HD7	I/O	This is the register data input/output terminal when the host interface is in the parallel mode. HA0 is the serial data output terminal in the serial mode. HD1 to HD7 must be fixed the “L” level during the serial mode.
14	VDD	—	Power supply.
15	VSS	—	GND.
17-21, 23, 24, 32, 33	MA0-MA8	O	DRAM address signal output terminal. The DRAM address signal output terminal must be connected to the DRAM address terminal in the way that the terminal numbers match each other.
22	VSS	—	GND.
25	CKEY	O	Chroma key signal terminal. This terminal goes to “L” while outputting the color that is specified as the key color. Set this terminal to OPEN when it is not used.
26	DTVLD	O	Video data identification signal terminal. This terminal goes to “H” outputting the picture of the frame memory. This terminal goes to “L” while outputting the border color or during blanking. Set this terminal to OPEN when it is not used.
27-29	PIN27-PIN29	—	Not used.
30	PIN30	—	GND.
31	VSS	—	GND.
34	XRAS	O	Low address strobe signal output terminal. Connect this terminal to the DRAM $\overline{\text{RAS}}$ signal terminal.
35	XMWE	O	DRAM write enable signal output terminal. Connect this terminal to the DRAM $\overline{\text{WE}}$ signal terminal.
36	XCAS2/MA9	O	Use this terminal when 8-Mbit DRAM is connected. Connect this terminal to the DRAM $\overline{\text{CAS}}$ signal terminal of the upper words (256K to 512K-1) side when the DRAM system consists of the two DRAMs $\times 256 \times 16$ bits (upper bite and lower bite are common). Connect this terminal to the MA9 terminal (common to the two DRAMs) when DRAM system consists of the two DRAMs $\times 512 \text{ Kw} \times 8$ bits.
37	XCAS0	O	This is the DRAM column address strobe signal output. Connect this terminal to the DRAM $\overline{\text{CAS}}$ signal terminal of the lower words (0 to 256 K-1) side when DRAM system consists of the two DRAMs $\times 256 \text{ Kw} \times 16$ bits (upper bite and lower bite are common). Connect this terminal commonly to the DRAM $\overline{\text{CAS}}$ signal terminal in all connections other than the above described connection.
38-43, 46-55	MD0-MD15	I/O	DRAM data signal input/output terminal. These terminals must be connected to the DRAM data terminals in the way that the terminal numbers match each other.
44	VDD	—	Power supply.

Pin No.	Pin Name	I/O	Description
45	VSS	—	GND.
56	OSDEN	I	OSD enable signal terminal. Polarity to enable the OSD can be changed by setting the register.
57-59	OSDB, OSDG, OSDR	I	OSD data input terminal. The color that is registered in the color table and specified by the three inputs (3 bits), is output when the signal that is input to the OSDEN terminal is in the enable state.
60	VDD	—	Power supply.
61	VSS	—	GND.
62	XVOE	I	Video output enable signal terminal. When this terminal is set to “L”, the picture data output and the DCLK output are enabled. When this terminal is set to “H”, they are disabled (high impedance). In order to make the output enable, the setting of the output control register must also be set to the enable state.
63-70	R/Cr0-R/Cr7	O	Picture data output terminal. Output data formats (RGB, YCbCr) and correspondence between terminals and output data can be changed by the register setting.
71-73, 76-80	G/Y0-G/Y2, G/Y3-G/Y7	O	
81-88	B/Cb0-B/Cb7	O	
74	VDD	—	Power supply.
75	VSS	—	GND.
89	DCLK	I/O	Dot clock (DCLK) signal terminal. The DCLK frequency is normally 13.5 MHz. The DCLK signal can be input from this terminal or can be output from this terminal after dividing-frequency of the clock input.
90	VDD	—	Power supply.
91	VSS	—	GND.
92	HSYNC	I/O	Horizontal sync signal terminal. When the internal sync generator is used, the horizontal sync signal that is obtained by frequency-dividing the dot clock (DCLK) is output. When the internal sync generator is not used, the external horizontal sync is input to this terminal.
93	VSYNC	I/O	Vertical sync signal terminal. When the internal sync generator is used, the vertical sync signal that is obtained by frequency-dividing the dot clock (DCLK) is output. When the internal sync generator is not used, the external vertical sync is input to this terminal.
94	FID/FHREF	I/O	This terminal is used for the two signals of the field identification signal (FID) and the horizontal sync phase reference signal (FHREF). Use of this terminal is determined by the register setting. When set to FID, this terminal is used as output terminal when the internal sync generator is used, and is used as input terminal when the internal sync generator is not used. “H” correspond to the odd fields. When this terminal is set to FHREF, the horizontal sync phase reference signal that is obtained by frequency-dividing XTL0, is output. When XTL0 is 8 fsc, the signal that corresponds to H. SYNC cycle is generated that can be used for phase comparison with the H. SYNC signal.

Pin No.	Pin Name	I/O	Description
95	CBLNK/FSC	I/O	This terminal is used for the two signals of the composite blanking signal (CBLNK) and the fsc signal. Use of this terminal is determined by the register setting. When set to CBLNK, this terminal is used as output terminal when the internal sync generator is used, and is used as input terminal when the internal sync generator is not used. When set to fsc, the signal that is obtained by dividing-frequency of XTL0 is output. The dividing ratio of either 1/8 or 1/16 can be selected.
96	CSYNC	O	Composite sync signal terminal. The composite sync signal is generated by frequency-dividing the DCLK signal. This terminal cannot accept any inputs.
97	XSGRST	I	Sync signal generator reset signal input. The internal generator is initialized by setting this terminal to “L”.
98	CLK0O	O	The clock signal that is obtained by frequency-dividing XTL0 is output from this terminal. Dividing ratio of either 1, 1/2, 1/4 or 1/8 can be selected.
99	DOUT	O	Audio digital output terminal.
100	DATO	O	Audio serial data output terminal to DAC.
101	LRCO	O	L/R clock output terminal to DAC.
102	BCKO	O	Bit clock output terminal to DAC.
103	FSXI	I	Clock input for audio interface. Input the 256fs (11.2896 MHz), 384fs (16.9344 MHz), 512fs (22.5792 MHz) or (33.8688 MHz) etc., to this terminal.
104	VDD	—	Power supply.
105	VSS	—	GND.
106, 107	XTL2O, XTL2I	O/I	Master clock terminal of the CD-ROM decoder and audio decoder. Either input the clock signal to XTL2I or connect an external oscillator between XTL2I and XTL2O. Recommended frequency is 45 MHz. This clock serves for internal circuit only, and is not synchronized with the input and output signals.
108	VDD	—	Power supply.
109	C2PO	I	This is the terminal to input the C2 pointer from CD-DSP. It indicates that the DATI input has an error.
110	LRCI	I	This is the terminal to input the LR clock from CD-DSP. It indicates if it is L channel or R channel.
111	DATI	I	This is the terminal to input the serial data from CD-DSP.
112	BCKI	I	This is the terminal to input the bit clock from CD-DSP. This is the clock to strobe the DATI input.
113	DOIN	I	This is the terminal to input the digital data from CD-DSP.
114	XHCS	I	This is the terminal of the chip select input signal during register access.
115	XHDT	I/O	This is the terminal to output the wait signal during register access. This terminal outputs the unique wait signal that is generated or not generated by the register, during DRAM access when the host interface is in the parallel mode. The pull up resistor is required since this terminal operates in the open drain configuration. Use the pull up resistor in the serial mode operation too.
116	HRW	I	This terminal receives the $R/\overline{W}$ input signal when the host interface is in the parallel mode. This terminal receives the serial clock input during the serial mode.

Pin No.	Pin Name	I/O	Description
117	XHIRQ	O	This is the interrupt request signal output terminal. The pull up resistor is required since this terminal operates in the open drain configuration.
118	XRST	I	This is the hardware reset signal input terminal. All operations are initialized when this terminal is set to “L”.

IC, RL5C293

Pin No.	Pin Name	I/O	Description
1	VCOIN	I/O	Charge pump output/VCO input terminal (Connect an external capacitor for loop filter, to this terminal).
2, 19, 39, 59	GND	—	Digital ground.
3	PALMODE	I	Video mode selection control terminal (LVTTL level). NTSC mode when PALMODE = 0. PAL mode when PALMODE = 1.
4	MASTERB	I	Video sync mode selection control terminal (LVTTL level). Internal sync mode when MASTERB = 0. External sync mode when MASTERB = 1. However, when CDGMODE = 1, mode is fixed to the external sync mode regardless of MASTERB status so that the MASTERB terminal functions the switch selecting either 262 (NTSC) or 312 (PAL) scanning line when MASTER B = 1, or 263 (NTSC or 313 (PAL) scanning line when MASTER B = 0, in the non-interlaced scanning. (See page 10) (This terminal has the pull-up function).
5	RESETB	I	Reset input terminal (LVTTL level). Enter the reset state when this terminal is set to “L”.
6-13	B7-B0	I	The data B input terminal (LVTTL level). Data input range is from 16 to 235, or from 0 to 255 (as controlled by the DICNT terminal) When FORM = 0, connect this terminal to ground.
14	TESTI0	I	Test input terminal Enters the test mode when TESTI0 = 1. Connect this terminal to ground or set it open.
15	PXCLK	I	Pixel clock input terminal (LVTTL level). When inputting the pixel clock, select the input pixel clock frequency that is appropriate for the respective modes. (See page 7.) Frequency accuracy of the subcarrier signal of the video signal depends on that of this clock signal. Therefore, determine the frequency accuracy of the pixel clock according to the required accuracy of the subcarrier signal.
16, 30, 63	VCC	—	Digital block power supply (+3.3 V or +5 V).
17	HSYNCB	I/O	Horizontal sync signal input/output terminal (LVTTL level). This terminal functions as the input terminal during the external sync mode, and as the output terminal during the internal sync mode. During the external sync mode, the input sync signal is sampled by PXCLK and only the fall-down edge is detected. The standard cycle of HSYNCB is 858 clock (VCD_NTSC) or 864 clock (VCD_PAL). (For CDG mode, see page 9.) This terminal functions as the output terminal during the internal sync mode.
18	VSYNCB	I/O	Vertical sync signal input/output terminal (LVTTL level). This terminal functions as the input terminal during the external sync mode, and as the output terminal during the internal sync mode. During the external sync mode, the input sync signal is sampled by PXCLK and the fall-down edge is detected. When the fall-down edges of HSYNCB and VSYNCB agree, the timing is judged to be the start of the ODD field. When they do not agree, the timing is judged to be the start of the EVEN field. This terminal functions as the output terminal during the internal sync mode.
20	FORM	I	Input format selection terminal (LVTTL level). When FORM = 0, the input format is CCIR-601YCbCr (4 : 2 : 2) . When FORM = 1, the input format is RGB input. (This terminal has the pull-up function).

Pin No.	Pin Name	I/O	Description
21	TRAPFEN	I	Internal trap filter control terminal (LVTTL level). Trap filter display is disabled when TRAPFEN = 0. Trap filter is enabled when TRAPFEN = 1. (This terminal has the pull-up function).
22-29	G7-G0	I	The G data or Y data input terminal (LVTTL level). The data input range is from 16 to 235 or from 0 to 255 in the case of the G data (as controlled by the DICNT terminal), and the data input range is from 16 to 235 in the case of the Y data.
31-38	R7-R0	I	The R data or CbCr data input terminal (LVTTL level). The data input range is from 16 to 235 or from 0 to 255 in the case of the R data (as controlled by the DICNT terminal), and the data input range is from 16 to 240 in the case of the CbCr data.
40	CLKOUT	O	Clock output terminal Clock output of the doubled frequency of PXCLK when CLKMODE = 0. Clock output of 1/2 the frequency of PXCLK when CLKMODE = 1.
41	FLDOUT	O	Field indication signal output terminal Outputs “H” when the field is the ODD field. Outputs “L” when the field is the EVEN field. Polarity of the terminal becomes invalid during the external sync mode.
42	OSDCLK	O	Clock output terminal for OSD_IC The clock signal having 1/2 the frequency of the input PXCLK frequency is output when CLKMODE = 0. The clock signal having 1/4 the frequency of the input PXCLK frequency is output when CLKMODE = 1. (See page 6.)
43	DICNT	I	The video data input control terminal (LVTTL level). Set this terminal to DICNT = 0 normally. When DICNT = 1 is set, the data input range of RGB can be expanded to the range of 0 to 255 on the condition that FORM = 0. When FORM = 1, the Cb data can be input starting from the odd cycle. (See page 8.) (This terminal has the pull-up function).
44	SLEEP	I	The SLEEP mode control terminal (LVTTL level). Normal operation mode is selected when SLEEP = 0. The SLEEP mode is selected when SLEEP = 1.
45	AVCC	—	Analog block power supply (+5 V).
46, 47, 50	NC	—	Be sure to set this terminal to open.
48	VIDEO	O	Analog video output terminal (This terminal is driven in 37.5 Ω).
49	IREF	—	An external resistor is connected to this terminal, that sets the full scale output current value.
51	COMP	—	An external de-coupling capacitor is connected to this terminal, that is used for phase compensation.
52, 53	AGND	—	Analog ground.
54	PAL4FSC	I	CDG_PAL4FSC mode selection control terminal. (LVTTL level). Status of this PAL4FSC terminal is made valid only when PALMODE = 1 and CDGMODE = 1. The mode is the CDG_PAL908fH mode when PAL4FSC = 0. The mode is the CDG_PAL4FSC mode when PAL4FSC = 1.
55-57	OSD2-OSD0	I	The input terminal to specify the OSD color. (LVTTL level). This input signal sampled by PKCLK and is encoded instead of the data supplied from the RGB input terminal when VSW = 1. When the OSD function is not used, connect this terminal to ground.

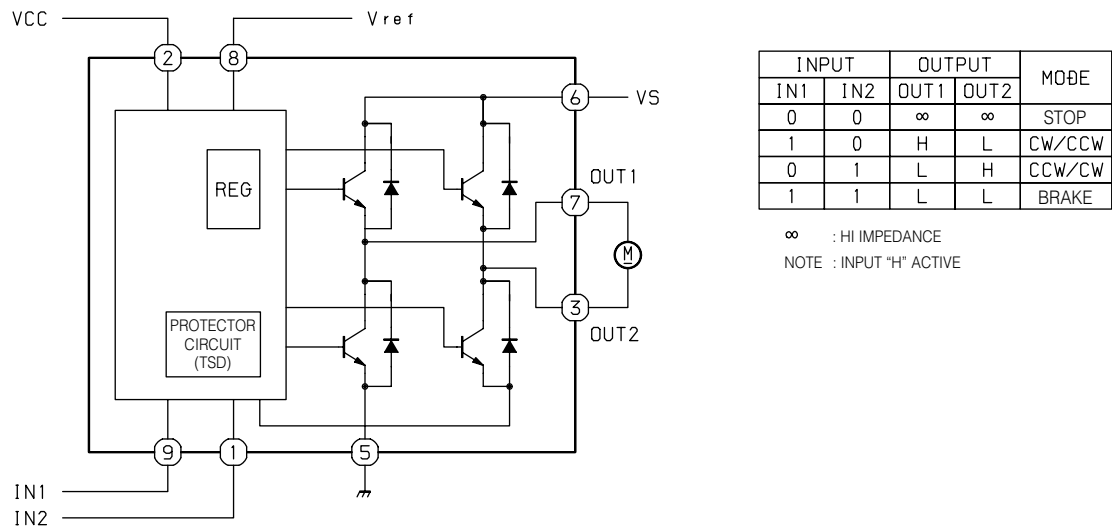
Pin No.	Pin Name	I/O	Description
58	VSW	I	The OSD background video control terminal. (LVTTL level). This input signal sampled by PXCLK and displays the data that is supplied from the RGB input terminal when VSW = 0, and displays the data that is supplied from the OSCD 0-2 input terminal when VSW = 1.
60	CDGMODE	I	The CDG mode selection control terminal. (LVTTL level). The VCD mode is selected when CDGMODE = 0. The CDG mode is selected when CDGMODE = 1. (See page 9.) (This terminal has the pull-up function).
61	PAL60	I	The PAL60 mode selection control terminal. (LVTTL level). Set this terminal to PAL60 = 0 normally. The PAL60 mode is selected when PALMODE = 1 and PAL60 = 1 at the same time. The setting of PALMODE = 0 and PAL60 = 1 is reserved. (See page 9.) (This terminal has the pull-up function).
62	CLKMODE	I	The pixel rate frequency input selection terminal. (LVTTL level). The pixel rate frequency is input to the PXCLK terminal when CLKMODE = 0. The double pixel rate frequency is input to the PXCLK terminal when CLKMODE = 0. (See page 7.) (This terminal has the pull-up function).
64	PLLGND	—	PLL ground.

IC, CXP84548-112Q

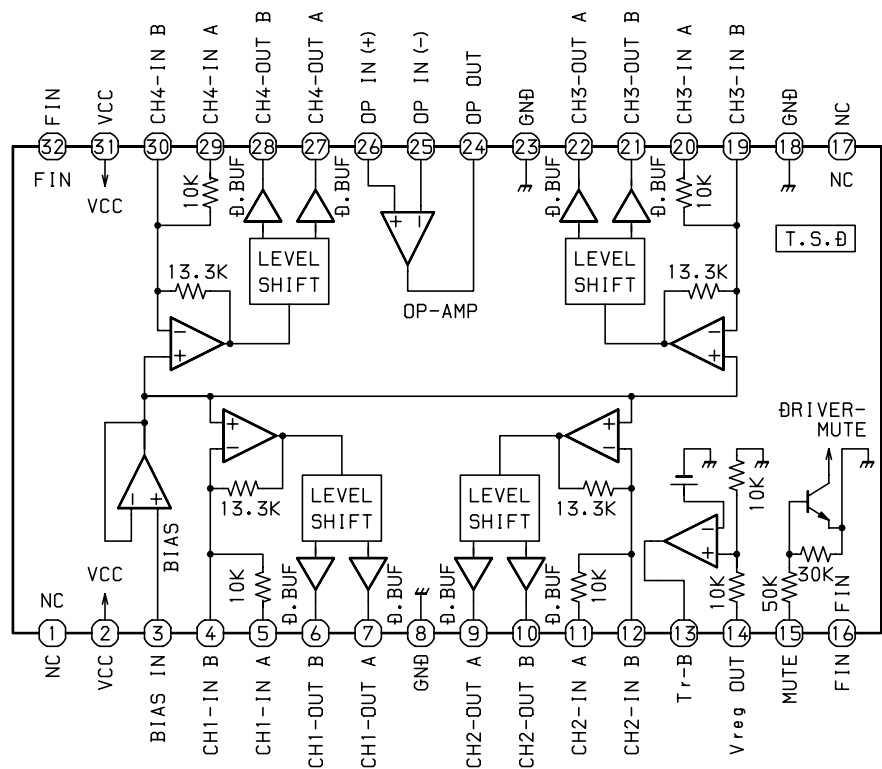
Pin No.	Pin Name	I/O	Description
1	CLV-W	I	Fixed to CLV-W: 1, CLV-N.
2	HSTSTP	O	Cause of STOP. 1: STOP by the stop request from the host.
3	VCD	O	DISC type. 1: When no in the VCD DISC
4	XRST	O	SSP/DSP reset output. Reset at “L”.
5	XHRST	O	CXD1856 reset output. Reset at “L”.
6	HA0	O	Title back: Connected to CXD1856 HA0.
7	HA1	O	Title back: Connected to CXD1856 HA1.
8	HA2	O	Title back: Connected to CXD1856 HA2.
9	HA3	O	Title back: Connected to CXD1856 HA3.
10	HXCE	O	Connected to title back ROM XCE.
11	HRW	O	Connected to bus select DIR, CXD1586 HRW.
12	BUS	O	Connected to bus select XG.
13	HCLK	I/O	Clock for address count.
14	HD0	I/O	Title back bus data 0.
15	HD1	I/O	Title back bus data 1.
16	HD2	I/O	Title back bus data 2.
17	HD3	I/O	Title back bus data 3.
18	HD4	I/O	Title back bus data 4.
19	HD5	I/O	Title back bus data 5.
20	HD6	I/O	Title back bus data 6.
21	HD7	I/O	Title back bus data 7.
22	PH0	O	Not used.
23	PICT	O	Title back bank select. (Connected to A16).
24	HRST	O	Address counter RST output.
25	VRST	O	RL5C293 reset output. Reset at “L”.
26	PALMD	O	PAL mode output. NTSC: L, PAL: “H”.
27	PAL60	O	PAL mode output. H: PAL60 (used together with PALMD: H)
28	XHDT	I	Connected to CXD1856 XHDH.
29	XHCS	O	Connected to CXD1856 XHCS.
30	XRST	I	Reset input.
31	EXTAL	I	External 12 MHz ceramic oscillator is connected to this terminal.
32	XTAL	O	External 12 MHz ceramic oscillator is connected to this terminal.
33	VSS	I/O	Connected to ground.
34	PE6	O	Not used.
35	PE7	O	Not used.
36	AVSS	—	GND.
37	AVREF	—	3.3 V power supply.
38	OSDDT	O	OSD serial, data output.
39	OSDXCS	O	OSD serial, CS output.
40	OSDCLK	O	OSD serial, clock output.
41	TRSRVO	I	Tracking servo ON/OFF. 1: ON, 0: OFF.

Pin No.	Pin Name	I/O	Description
42	HALT	I	HALT input. 1: HALT detected (A/D conversion value is 80 H or higher).
43	LSW	I	Pick up inside switch input. “L” when INSIDE is detected.
44	EMPH	I	Emphasis input. ON only (CD-DA) at “H”.
45	VMODE	I	NTSC/PAL AUTO/PAL selection. (Analog input).
46	O-BUSY	O	Busy input to host microprocessor.
47	I-BUSY	I	Busy output from host microprocessor.
48	CLOCK	I	Host microprocessor, clock input.
49	COMMAND	I	Host microprocessor, data input.
50	STATUS	O	Host microprocessor, data output.
51	SQCK	O	Clock output for reading SQSO.
52	SQSO	I	Inputs such as SUBQ, PCM, DATA, level data, status and others.
53	PB7/SO1	O	Not used.
54	FOK	I	FOK input.
55	GFS	I	GFS input.
56	SENS2	I	SENS 2 input.
57	SENS	I	DSP SENS input.
58	MD2	O	DSP DIGITAL OUT MUTE output. ON at “H”.
59	RBPLS	O	Tracking balance fraction data output. (A+B)/2.
60	VSUNC	I	V. SYNC input.
61	SCOR	I	Subcode sync input. “H” during S0,S1 input.
62	HIRQ	I	Connected to CXP1856 HIRQ.
63	CNIN	I	C input.
64	CLOK	O	Clock output to CD DSP.
65	P15	O	Not used.
66	DATA	O	Data output to CD DSP.
67	XLAT	O	XLAT output to CD DSP.
68	AMUTE	O	LINE OUT MUTE output. Mute at “H”.
69	DMUTE	O	DSP mute output. Mute at “H”.
70	VMUTE	O	RL5C293 sleep output. Normally “L” / Sleep at “H”.
71	DEEM	O	Deemphasis output. Deemphasis ON at “H”.
72	VDD	—	3.3 V power supply.
73	NC	—	Not used.
74	PG4	O	Not used.
75	PG5	O	Not used.
76	PG6	O	Not used.
77	PG7	O	Not used.
78	SH	I	Pick that is equipped with shutter. 1: With shutter.
79	AUTO	I	Auto adjustment YES/NO. 1: Auto adjustment YES.
80	DISP	I	Auto adjustment value indication. 1: Indicated.

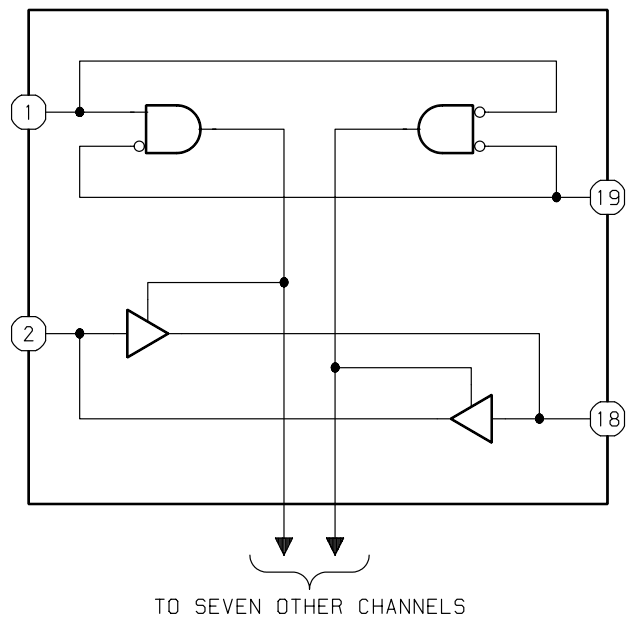
IC BLOCK DIAGRAM
IC, TA7291S



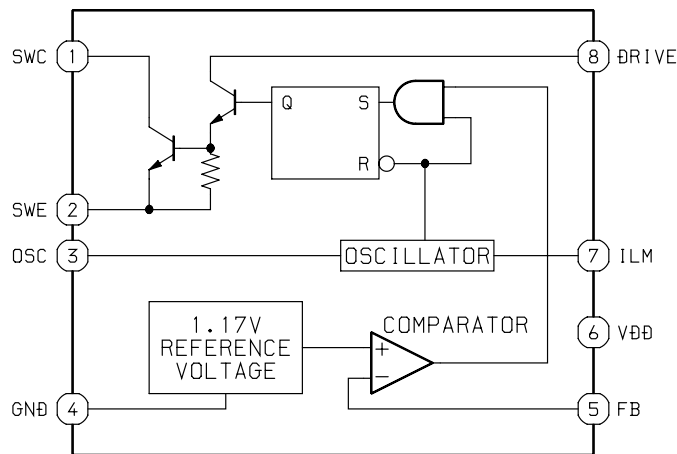
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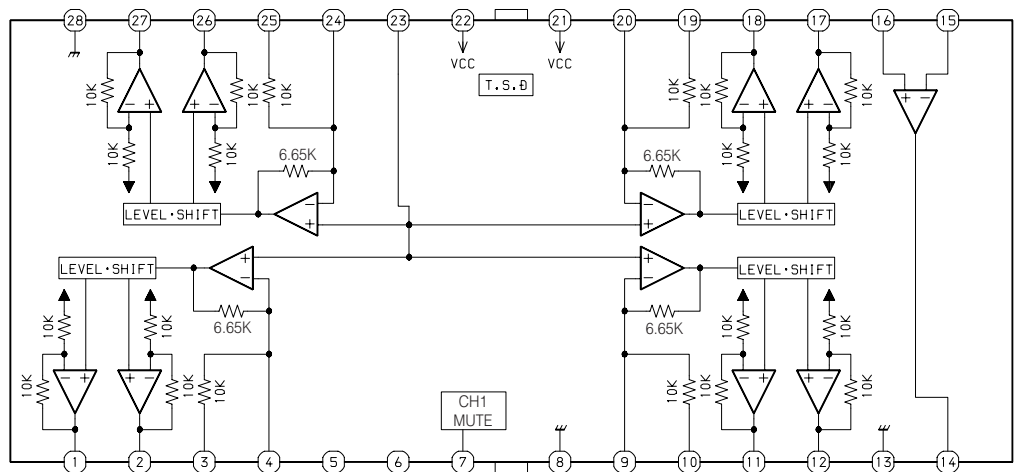
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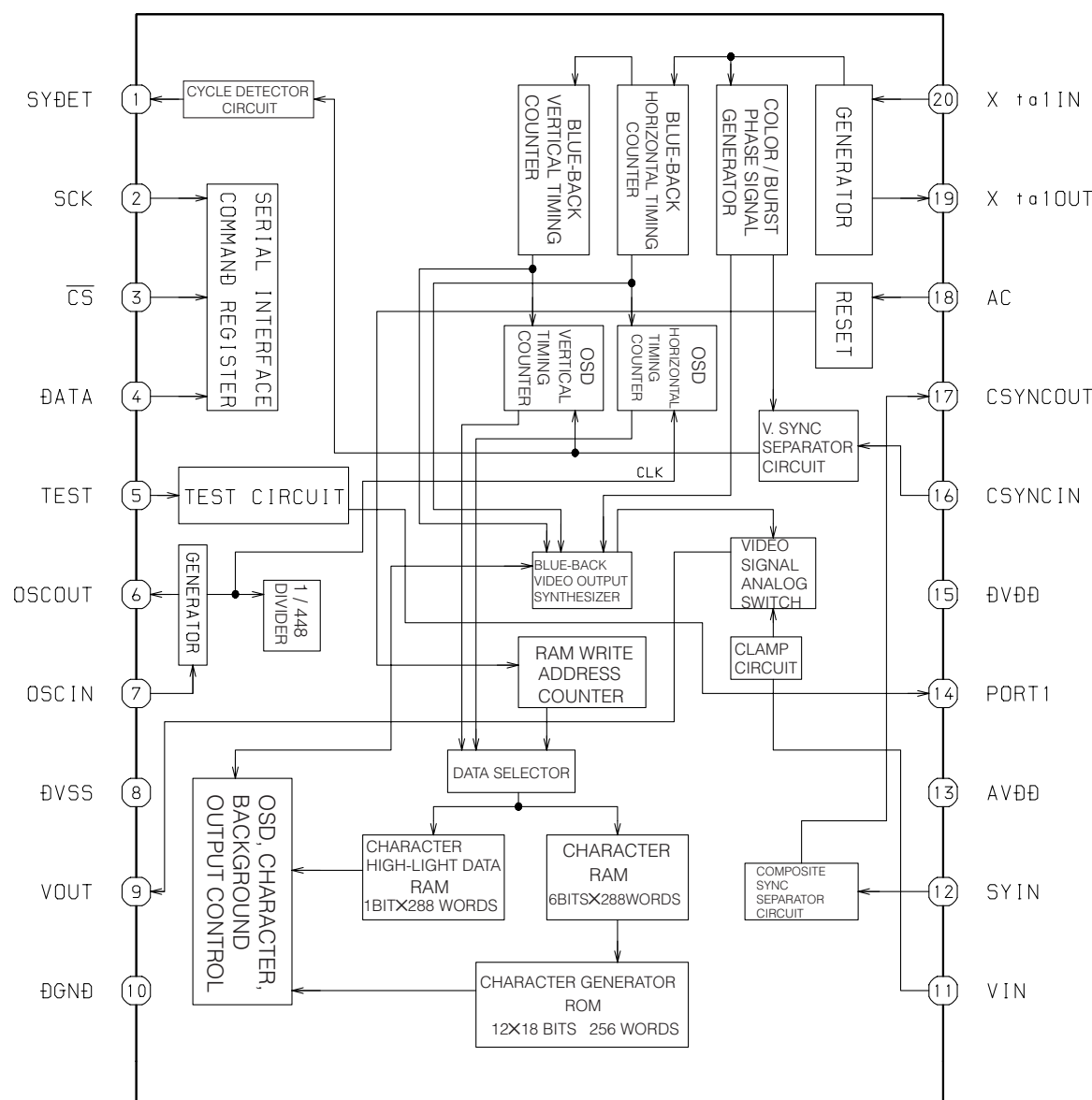
IC, M5291FP



IC, BA5915



T.S.D: Thermal shut-down
Resistors are in units of Ω .



TEST MODE

< How to Enter the Test Mode >

While pressing the PROGRAM key, insert the AC power cord to AC wall outlet.

< When the Machine Has Entered the Test Mode >

The system is initialized and the main power is turned on. During the test mode, the main power of the CD block is turned on always. The test mode starts with the [Sled mode].

< Types of Test Mode >

[Sled mode]

All displays of the FL tubes light. The optical pickup can be moved by pressing [◀] or [▶] key.

Pressing the [□] key establishes the [Focus mode].
Pressing the [▷] key establishes the [Play mode].

Pressing the [◀◀] key moves the sled to outer circumference.
Pressing the [▶▶] key moves the sled to inner circumference.
Pressing OPEN/CLOSE key opens or closes the tray.

[Focus mode]

Lighting of all displays of the FL tubes are turned off and returns to normal display. The focus search is performed in the focus mode regardless whether disc is inserted or not, or focus OK or NG. (Numbers of times of focus search is unlimited. Auto sequence is not used.)
Focus servo is not locked in even the focus is obtained.

Pressing the [▷] key establishes the [Play mode].
Pressing the [◀◀] key decreases the track number to -1.
Pressing the [▶▶] key increases the track number to +1.
Pressing OPEN/CLOSE key opens or closes the tray.
The machine enters the [Sled mode].

[Play mode]

Lighting of all displays of the FL tubes are turned off and returns to normal display. The focus search (numbers of search is unlimited) is performed. When focus comes to in-focus, the focus servo is locked in and the machines enters the normal play mode.
During [Play mode], GFS and sound skipping are not monitored.
When focus becomes out-of-focus, another attempt is made to search for focus.
The tracking servo and the sled servo can be turned on and off by pressing the [▷] key.

Pressing the [□] key establishes the [Sled mode].
The [||] display can be turned on and off by pressing the [▷] key .

While the [||] display is turned off:
CLV-A Tracking servo: on
Sled servo: on

While the [||] display is turned on:
CLV-A Tracking servo: off
Sled servo: off

Pressing the [◀◀] key decreases the track number to -1.
Pressing the [▶▶] key increases the track number to +1.
Pressing OPEN/CLOSE key opens or closes the tray.
The machine enters the [Sled mode].

< How to Exit the Test Mode >

Remove the AC power cord from power outlet, or turn off the system power.

The focus bias, tracking balance and the tracking gain adjustment values can be displayed, modified, set and released in the Play mode only of the following Test mode.

When the PRGM button is pressed during Play, the adjustment value of the focus bias is displayed. After that, you can enter the followings:

- FOCUS - BIAS

[Display]: Pressing the RANDOM key during disc play, the focus bias setting value is displayed.

[Adjustment]: Every pressing of the ⌘ key decrements the adjustment value by 1 step.
Every pressing of the ⌘ key increments the adjustment value by 1 step.

[Set]: The adjustment value is set by pressing the PLAY key after adjustment. Playback a disc after setting.

[Release]: The set value can be released by pressing the STOP key.

- TRACKING - BALANCE

[Display]: Pressing the REPEAT key during disc play, the tracking balance setting value is displayed.

[Adjustment]: The same procedure as in the FOCUS - BIAS.

[Set]: The same procedure as in the FOCUS - BIAS.

[Release]: The same procedure as in the FOCUS - BIAS.

- TRACKING - GAIN

[Display]: Pressing the DISPLAY key during disc play, the tracking balance setting value is displayed.

[Adjustment]: The same procedure as in the FOCUS - BIAS.

[Set]: The same procedure as in the FOCUS - BIAS.

[Release]: The same procedure as in the FOCUS - BIAS.

Display method

888--88:88

- FOCUS - BIAS

F8--88

- TRACKING - BALANCE

8L--88

- TRACKING - GAIN

GA--88

1. How to Activate CD Test Mode
Insert the AC plug while pressing the function CD button.
FL display tubes will show the “start mode” display
(repeating the indications “TEST” and “00 00 00” alternately), and the test mode will be activated.
2. How to Cancel CD Test Mode
Either one of the following operations will cancel the CD test mode.
 - Press the function button.
 - Press the power switch button.
 - (except CD function button) • Disconnect the AC plug
3. Description of the CD Test Mode Functions
When test mode is activated, the following mode functions from No. 1 to No. 4 can be used by pressing the operation keys.

[Values of Focus Balance, Tracking Balance and Tracking Gain]

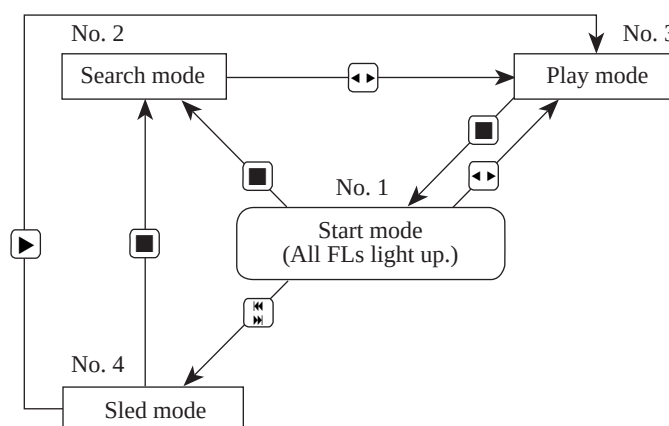
The displayed contents show the actual value after flashing three times.

Mode/No.	Operation	FL display	Operation	Contents
Start mode No.1	Activation	Start mode display	• Test mode is activated. • CD block power is ON.	• Automatic adjustment value
Search mode No.2	■ key	“  ”	• Laser diode turns always ON. • Continual focus search (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes. * NOTE 1	• APC circuit check • Laser current measurement (Laser current control. Across a resistor connected between emitter and GND.) FOCUS SERVO • Check focus search waveform • Check focus error waveform (FOK/FZC are not monitored in the search mode)
Play mode No.3	◀▶ key	Normal display	• Normal playback	FOCUS SERVO/TRACKING SERVO CLV SERVO/SLED SERVO Check DRF
Sled mode No.4	⏮ key ⏭ key	Start mode display	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 2 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

- * NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.
- * NOTE 2: When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.
- * NOTE 3: The machine cannot enter the traverse mode even though the PAUSE button is pressed during PLAY. It enters the normal PAUSE state.

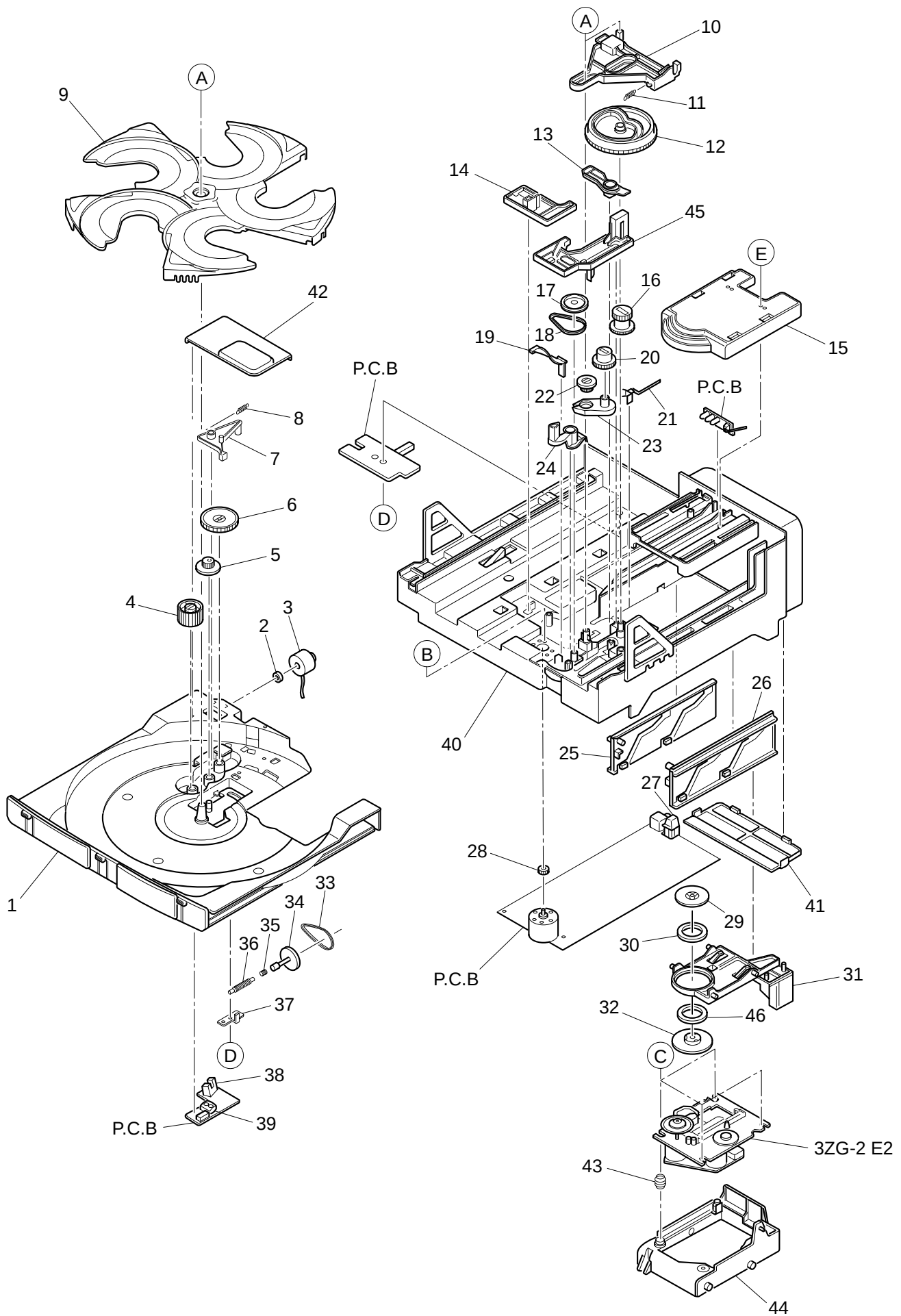
4. Operation Outline

The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



If the DISC DIRECT PLAY button is pressed, the machine performs the same operation as the PLAY button is pressed as shown. If the tray is opened by pressing OPEN/CLOSE button during Play mode or Traverse mode, the machine returns to the Start mode.

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

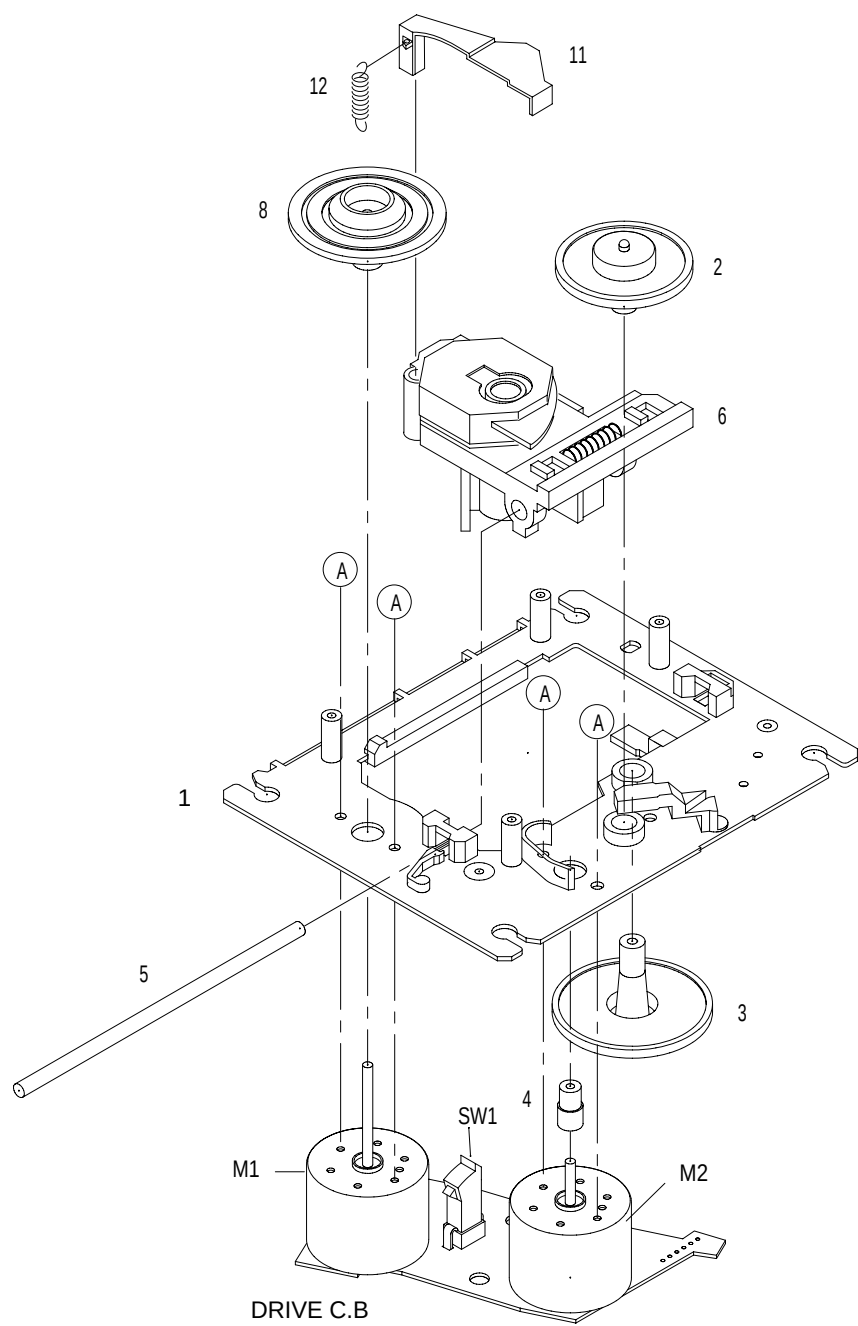
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZG1-001-310		TRAY, 5CD	30	83-ZG3-602-010		RING, MAG<YVOS1NDM, VOS1NDSM>
2	84-ZG1-267-010		PULLEY, LOAD MO 8	30	84-ZG1-300-010		MAGNET, CLAMPER 4P
3	87-A90-036-010		MOT ASSY, RF-300CA-11				<EXCEPT YVOS1NDM, VOS1NDSM>
4	86-ZG1-228-110		GEAR, TT-B	31	86-ZG1-215-010		HLDR, CHUCK
5	86-ZG1-227-110		GEAR, TT-A	32	86-ZG1-238-010		HLDR, MAGNET 6ZG N
				33	86-ZG1-225-010		BELT, SQ1.2-32.9
6	86-ZG1-223-110		GEAR, WORM-WHEEL TT	34	86-ZG1-221-010		PULLEY, TT
7	86-ZG1-224-110		LEVER, TT(*)	35	86-ZG1-231-010		SPR-C, WORM
8	86-ZG1-226-010		SPR-E, LEVER TT	36	84-ZG1-256-010		GEAR, WORM N2
9	86-ZG1-002-210		TURN TABLE, 5CD	37	86-ZG1-232-010		SPR-P, WORM
10	86-ZG1-211-210		JOINT, CAM	38	86-ZG1-229-010		HLDR, SENSOR
11	86-ZG1-216-010		SPR-E, JT	39	86-ZG1-230-010		HLDR, DISC SENSOR
12	86-ZG1-203-210		GEAR, MAIN CAM	40	86-ZG1-201-210		CHAS, MECHA
13	86-ZG1-213-110		LEVER, LOAD	41	86-ZG1-005-110		COVER, CHAS
14	86-ZG1-214-110		LEVER, PROTECT	42	86-ZG1-003-110		COVER, TRAY
15	86-ZG1-004-010		REFLECTOR, CD	43	80-CD3-214-010		CUSH CD A
16	86-ZG1-205-110		GEAR, TRAY	44	86-ZG1-202-210		HLDR, MECHA
17	84-ZG1-207-010		PULLEY, RELAY	45	86-ZG1-212-410		SLIDER, LOAD
18	84-ZG1-209-010		BELT, SQ1.8-117.7	46	86-ZG1-239-110		PLATE, DISC
19	86-ZG1-217-010		LEVER, SW	A	87-078-148-010		VFT2+3-12(F10) BLK
20	86-ZG1-206-110		GEAR, RELAY B	B	87-251-072-410		U+2.6-5
21	86-ZG1-220-110		SPR-P, LOCK	C	81-ZG1-254-010		S-SCREW, MECH HLDR
22	86-ZG1-204-110		GEAR, RELAY A	D	87-067-579-010		TAPPING SCREW, BVT2+3-8
23	86-ZG1-218-110		PLATE, GEAR	E	87-067-703-010		TAPPING SCREW, BVT2+3-10
24	86-ZG1-208-010		LEVER, TRAY				
25	86-ZG1-209-110		SLIDER, CAM L(*)				
26	86-ZG1-210-110		SLIDER, CAM R(*)				
27	84-ZG1-244-310		CABI, OPTICAL				
28	84-ZG2-228-010		PULLEY, MOT				
29	83-ZG3-211-010		PLATE, DISC<YVOS1NDM, VOS1NDSM>				
29	86-ZG1-242-010		PLATE, DISC BLK				
			<EXCEPT YVOS1NDM, VOS1NDSM>				

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-2 E2)



CD MECHANISM PARTS LIST 1/1 (3ZG-2 E2)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY, SHT
2	83-ZG2-235-010		GEAR, A3
3	83-ZG2-205-210		GEAR, B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT, SLIDE 3
6	87-A90-836-010		PICKUP, KSS-213F
8	83-ZG2-233-010		TURN TABLE, A5
11	83-ZG2-245-110		LEVER, SHUTTER
12	83-ZG2-250-010		SPR-E, SHT 2
A	87-261-032-210		SCREW V+2-3

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

